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CORONARY THROMBOSIS: WITH ESPECIAL REFERENCE TO SYMPTOMS.

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Notwithstanding that acute coronary thrombosis is today recognized as a disease entity and one of the most frequent causes of sudden death, it was hardly known more than fifteen or twenty years ago. This can be well understood on account of the general impression prevailing until fairly recently that the coronary arteries were end-arteries, a conclusion fostered by the results of Cohnheim's experiments in which he reported that dogs would hardly live more than two hours after ligation of one of the coronary arteries. However, the works of Spaltehalz, Gross and others have proven that well developed anastomoses exist with the coronary vessels, the extent of which show steady increase with the age of the individual, and Wearn has shown that the Thebesian veins have been able to carry on the blood supply to the heart muscle when the coronary ostiae had been completely occluded by progressive syphilitic aortitis.

As Herrick well states: "If a coronary artery or one of its largest branches is occluded as if by a thrombus or embolus, the portion of the heart muscle supplied becomes anemic—infected as it is often called and, unless collateral circulation suffices to prevent, undergoes death. The necrotic muscle may rupture or, if the patient lives, becomes fibrous, perhaps thinned out and bulging in the so-called aneurysm of the heart. While such a scarred portion of the heart wall may be functionless as far as the contractility is concerned, if it holds, it may enable the undamaged portion of the heart still to perform its work in a more or less efficient manner."

In presenting this paper I have nothing original to offer but am endeavoring to bring to you the salient features of many excellent contributions that have been made on the subject as well as some observations of my own.

The right coronary artery arises from the aorta just below the right aortic cusp and the left coronary artery from just below the level of the left aortic cusp. The right coronary artery supplies chiefly the right ventricle and a part of the left ventricle; the left coronary artery supplies principally the left ventricle and gives some supply to the right ventricle. The branches of both of these give supply to the septum. The sino-auricular node is supplied through a branch of the right coronary artery in 60 per cent of cases, according to Gross; the auricular-ventricular node receives its supply from the right coronary artery in 92 per cent; the right limb of the bundle of His usually from the left artery and the left limb of the bundle is supplied by branches of the left and right coronary arteries. According to Hamman, the anterior descending branch of the left coron-

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ary artery is more frequently occluded than all of the other coronary branches combined, fully four-fifths of the cases. As this vessel supplies the apex of the left ventricle, the left anterior third of the right ventricle and a portion of the interventricular septum possibly all of these structures might be more or less affected in the case of occlusion of this vessel. It can therefore be well seen that it will not be possible to determine just which artery will have become occluded in the case of a pulmonary embolus in the brain, spinal cord, kidney or other part of the body.

Huchard credits Drelincourt in 1700, and Thebesius and Bellini in 1703, with the first observations on coronary sclerosis and Cruveilhier was the first to describe this condition in 1850. Frequent reports of rupture of the heart have been found by Benson in the older writings in the case of notable medical men as Morgagni, Hunter, Charcot, Nothnagel and William Pepper.

While Dock contributed in 1896 "Some Notes on Coronary Arteries," yet, it was in 1910 that Obratzow and Strachesko, two Russians, gave the first satisfactory account of coronary occlusion and reported three cases in which two of them had been diagnosed prior to autopsy. Since that time there have been many excellent contributions by eminent American writers as Osler, Dock, Barker, Hamman, Libman, Pardee, White, Longcope, Willius, Levine, Blumer, Gordinier, Herrick, Faulkner and others.

The early observations made in the case of coronary infarcts by such men as Laennec, Corvisart and Rokitansky lead them to believe the condition was that of fatty degeneration of the heart-muscle, although they observed that the supposed fatty degeneration was localized and not general, and Laennec reported that the portion of the heart showing this degeneration "did not grease paper when rubbed on it" and none of them realized that the condition in the heart muscle, as described, was that of infarct as the result of coronary artery closure. Quain, in 1850, was one of the first to show that this supposed "fatty degeneration" of the heart muscle was the result of coronary thrombosis.

The most frequent cause of acute closure of the coronary arteries is thrombus and, in the majority of cases, there has previously existed well-defined arterio-sclerosis. for arterio-sclerosis is more frequent in the coronary arteries than in any other except the aorta, twice as often as in the vessels of the brain and three times as often as in those of the kidneys. While the atheromatous changes are slow to take place, yet, when the vessels will have become sufficiently constricted, a thrombus might quickly form so as to completely close the lumen of the vessel. While emboli and disease of the root of the aorta might, at times, be responsible, the usual cause, as stated, is thrombus. The results of the occlusion will depend upon whether there has been a gradual narrowing of the lumen of the vessel involved—so that there will have been time for anastomoses with other vessels to take place—or, if it is sudden and without any previous preparation, the infarcted area might go on to softening and rupture before the necessary collateral circulation can have been established. Again, the size of the vessel occluded will be a factor, whether of large size, supplying a relatively large area or a minute arterial twig which could hardly influence the heart except by bringing about some degree of myocardial fibrosis.

In discussing symptoms of acute coronary thrombosis it will be well first to consider three groups:—Those in which death is immediate or occurs in from a few minutes to a few hours; those which show grave myocardial symptoms and who either recover or live for several days or weeks and those whose symptoms are so slight as to make the diagnosis hardly more than probable.

In some of the cases of sudden death, the end comes so quickly and so apparently painlessly that Krehl has called attention to the peculiarities of the death with an apparent absence of terminal respiratory agony without distortion of features and with no muscular spasm. Death is so immediate and so transfixing that the exact manner of it is not known.

In instances in which only small arterial twigs are occluded the symptoms might be no more than a twinge of pain or slight discomfort often thought due to some digestive derangement not known until possibly at autopsy after probably a later and fatal attack of the same trouble, the myocardial fibrosis found will show the changes resulting from previous small vessel closures.

Pain is the outstanding symptom and it is practically always present. The pain is sudden and intense, usually retrosternal and epigastric and sometimes with radiation to one or both arms and it is not relived by rest or nitroglycerin and usually requires large doses of morphin to afford relief and, in spite of these agents, in some cases, the pain continues and there ensues that conditon known as status anginosis and, from which, few recover.

Shock, usually severe, is practically always present. The skin is pale, cold, clammy, and covered with perspiration. The very appearance of the patient shows the great seriousness of the condition. The pulse is rapid and weak, frequently very irregular; the heart impulse is feeble, the heart sounds are so muffled and distant that it is difficult at times to detect the heart's action. Gallop rhythm might be present and embryocardia, or "tic-tac" quality of the heart sounds, might be noted. The blood-pressure, which usually before has been relatively high, quickly falls to 100 or 80 or even lower, the lowered blood-pressure frequently bringing about urine suppression. Some degree of cyanosis is nearly always present and there often develops a peculiar ashen-hue which Sanson describes as "a leaden tint spread over an earthy hue of skin."

Dyspnea, as the result of myocardial damage, is usually present, and while the three characteristic symptoms of coronary thrombosis are pain, shock and dyspnea, yet pain, at times, might be absent. This is especially in the case of myocardial insufficiency and in which cases dyspnea, often very extreme, is practically the only symptom evidencing the nature and seriousness of the condition.

Pulmonary edema usually occurs in a few hours, as the result of myocardial weakness, in the bases of both lungs but, in some cases, moist rales are heard over practically the whole chest. Pulmonary edema is of practically constant occurrence, especially in the severer cases, and Herrick and Murphy have reported instances in which a condition of the lungs, almost suggesting emphysema, has occurred with coronary thrombosis. Cheyne-Stokes breathing is also of frequent occurrence.

Fever, usually ranging from 100 to 102 degrees F. and polymorphonuclear leukocytosis from 10,000 to 20,000, usually develop from a few to 24 hours after the attack and are the results of absorption from the area of infarction.

Pericardial friction sounds are frequently to be heard, but by no means constant, and, when heard, constitutes one of the most important diagnostic features of coronary thrombosis. They are due to pericardial irritation resulting from the infarction, but might not be present if the infarct lies deeply in the heart muscles or, the friction sounds might not be heard if the pericardial involvement is on the posterior surface of the heart.

The frequent epigastric pain and associated digestive tract disturbances as nausea, vomiting, diarrhea, sometimes even rigidity of the abdominal muscles, might so closely simulate acute intra-abdominal emergencies as perforating gastric or duodenal ulcer,

gall-stone colic, acute pancreatitis and acute peritonitis as to make the true condition difficult to interpret. This has been well brought out by Anderson, Hardt, Faulkner, Marble and White, Levine and Tranter.

The prognosis in the severe cases is always grave and even in the milder cases should be considered serious. It was formerly believed that no patient ever recovered from an attack of coronary thrombosis, but it is now thought by Barker and others that the average death-rate from all types combined is hardly more than 50 per cent. Some cases have been known to survive several severe attacks and there are doubtless large numbers of very mild cases of this trouble that are never diagnosed.

Consciousness is usually present throughout the attack and the patient realizes the intense gravity of his condition and, on account of some agonizing pain, tries to immobilize himself against it, but, in some cases, consciousness is quickly lost and remains so until death.

Diagnosis is made by the sudden and intense retrosternal pain, usually referred to the epigastrium, occurring without physical effort or emotional strain, not relieved by rest or nitroglycerin and requiring large doses of morphin to afford relief, with severe "shock," cold, clammy skin with sweating, rapid, weak and frequently irregular pulse, feeble heart impulse with distant and muffled heart sounds, low blood-pressure, dyspnea, pulmonary edema, fever, leukocytosis, pericardial friction sounds and, sometimes, embolic manifestations. Again, a history of past attacks of angina pectoris or of supposed indigestion, relieved by belching, a "pinch" of soda, etc., together with the incidence of age, if over 50 years, and of sex, if patient is male, will be of help in reaching a conclusion as to the condition.

The electrocardiograph, at times, is of great value in differentiating the arrhythmias, giving evidences of delay in conduction (i.e. partial heart-block), interruptions of conduction (i.e. bundle branch block, arborization block and complete heart-block), evidences of impaired myocardial tone with low voltage in all leads, and, as so emphasized by Willius, the inversion of the T-wave and of the characteristic S-T interval and upward convexity of the T-wave as shown by Pardee, are often of great assistance in diagnosis and in following the progress of the patient while under treatment. In the clear-cut case of coronary thrombosis, with many of the cardinal symptoms present, the electrocardiograph will not be necessary, but in many mild and atypical cases its use will not only be of assistance, but will be the only positive means of knowing the true condition present.

The differential diagnosis concerns especially angina pectoris from which, at times, it is exceedingly difficult. Most cases of coronary thrombosis will give a history of previous anginal attacks; many cases of angina pectoris frequently develop coronary thrombosis. The conditions are, in their pathology very similar and both have to do with coronary sclerosis and I believe this conclusion is generally accepted and the excellent work of Keefer and Resnik would serve to prove that angina pectoris is due to cardiac anoxemia, and these two conditions would appear to have much in common. If it might even be so considered, there is a difference of degree of anoxemia, in that, in both, there is a lessened blood supply to the heart muscle, except in coronary thrombosis there surely takes place definite, fixed pathological changes which permanently shut off the circulation to the part supplied by the vessed prior to the occlusion.

The contrast of the two conditions might be summed up as follows:

CORONARY THROMBOSIS.

Pain usually without effort—either physical or emotional.

Epigastric pain more common.

Brachial radiation not common.

Dyspnea present.

Pain of long duration.

Arrhythmias frequent.
Frequent rales in lungs.
Nitrates do not give relief.
Attacks might occur at night.
Shock usually markedly present.
Low blood-pressure.
Fever and leukocytosis develop.

ANGINA PECTORIS

Pain usually follows physical or emotional effort.
Epigastric pain less common.
Brachial radiation common.
Dyspnea absent.
Pain of short duration.
Arrhythmias absent.
Lung signs absent.
Nitrates give relief.
Attacks rarely take place at night.
Shock not present.
Blood-pressure usually elevated.
Fever and leukocytosis do not occur.

In treatment, the patient should be put at absolute rest and morphin should be given generously to control the pain and to keep the patient quiet, when restless. Heart stimulants—as caffeine sodium benzoate, strychnine and Coramin—should be given, if necessary, for weakened heart action. Intracardiac injections of suprarenal extract might be used if death seems imminent. The heart had best be digitalized according to the Eggleston method and daily maintenance doses should be given until the condition of the heart will justify its discontinuance. Barker advises the administration of insulin in the case of persistence of pain—status anginosis—such as was originally suggested by Ambard and from which he claimed such good results. The bowels should be moved by enema. All food should be withheld for several days and, after that, should be bland and supporting and of an alkaline character. Fluids should be given in great moderation. The patient should be kept as much at absolute rest in bed as possible for 5 to 6 weeks, hardly being allowed to move himself in any way, but to be constantly under the care, where possible, of a capable and observing nurse.

When finally permitted out of bed, great care must be taken to see that the exercise allowance is increased most gradually and that all fatigue and emotional upsets should be avoided; that there should be no straining at stool and that overeating should never take place as the consequent abdominal distention and upward diaphragm displacement might bring about such angulation of the great vessels, especially the aorta, as to possibly precipitate another attack. Alcoholic beverages of all kinds should be prohibited, no form of tobacco should be used, and coffee, tea, and all other stimulating drinks should be avoided.

On account of the fact that the majority of cases of coronary thrombosis are believed to be the result of pre-existing arterio-sclerosis it is reasonable to assume that whatever would decrease the incidence of arterio-sclerosis would also decrease coronary thrombosis, as well. Consequently, the proper selection of food in which only a minimal amount of rich proteins and fats are taken and highly-seasoned foods and condiments are avoided and, as already stated, the avoidance of coffee and other stimulating drinks—especially all forms of alcohol—as well as of tobacco and by the taking of proper and adequate exercise and securing sufficient rest and diversion from one's daily work, the chances of such an accident as coronary occlusion would be greatly lessened.

Again, it will be well to mention the possible danger from the intravenous administration of dye for gall-bladder visualization with those who give a past history of angina pectoris or show other evidences of atherosclerosis as both Frothingham and Maher report cases of sudden death following the intravenous administration of the dye in which, at autopsy, acute thrombosis of one of the coronary vessels was shown.

From the foregoing, it can be well seen that the incidence of coronary thrombosis is much greater than generally supposed and physicians should become familiar with

the clinical picture of this condition so that it might be recognized at a time when the greatest good might come from treatment. In many cases, the differential diagnosis of coronary thrombosis from angina pectoris and acute intra-abdominal conditions will be easy; in others, probably difficult and there will be, at times, cases in which the absolute diagnosis might not, at once, be possible but if physicians will keep before them the frequent occurrence of coronary thrombosis when the symptoms of this condition present themselves they will be better able to rule out needless surgery and there will probably be fewer newspaper reports of "acute indigestion" and "ptomaine poisoning" as the causes of death.

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DISCUSSION.

Dr. P. W. Rowland (Oxford): Dr. Rembert asked me very kindly to discuss his paper and I think he had a motive in it. I rather suspect he wants me to say, "Now, old fellow, what will you do with your digitalis here?"

To me the main factor involved in primary arterial thrombosis is one of nutrition of the heart muscle. Coronary vessels are vessels that supply nourishment to the heart and anything that involves their occlusion of course, will interefere with the nutrition of the heart muscle. So it resolves itself into a question of nutrition.

There is one thing I think we should rid ourselves of and Dr. Rembert alluded to it in his paper. I think we ought to quit calling these people who die suddenly or signing their death certificates "acute indigestion" cases. There isn't any such disease. Nine out of ten of those people die with acute arteriothrombosis. They generally die suddenly. They generally die with some acute gastric crisis, vomiting, or pain, epigastric pain.

I want to confine myself to the treatment. Dr. Rembert mentioned adrenalin. I would no more think of giving adrenalin to a patient with thrombosis of the coronary artery and accompanying weakening of the heart muscles than I would think of giving him a grain of strychnin. I would kill him just as sure as fate and within a very short time if I did it.

How would adrenalin do it? You have a blood pressure of from 90 to 100, rarely above 100. That blood pressure, of course, is due to myocardial weakness. There isn't any primary involvment of the vascular circulation. What do you do with the adrenalin? You immediately contract the arterioles in the splanchnic area and shut down the arterioles in the kidney and force the blood all to the brain and to the heart. You have a heart that is already overworked and when you do that you stop it. There is a pulmonary edema already existing, so the adrenalin simply intensifies the condition, puts the amount of work on the heart that the heart is incapable of doing and it is paralyzed at once.

Would I use digitalis? You bet your life! Why would I use digitalis? Because one of the main pharmacological effects of digitalis is dilation of the coronary vessels. This idea of digitalis raising the blood pressure doesn't amount to anything. There isn't anything in that. If you have a blood pressure of 200 in a patient and are afraid to use digitalis, get rid of that fear. That shouldn't cut any figure at all. The chances are it will lower the blood pressure. Digitalis, by dilating the coronary arteries, gives the heart a better opportunity to be better nourished. It receives better nourishment and that is what the heart has to have. The heart dies for the want of nourishment, it becomes paralyzed. The secondary inflammatory changes come about, and unless you can provide nourishment for the

heart in some way, it is going to play out pretty soon.

Now the question comes in concerning the combustion of digitaloids which supply the very food that nature intended for that heart. The Lord Almighty put digitalis in the ground for that very purpose: to be fed to hearts that have a myocardial insufficiency, and that is the only indication for digitalis at any time, a myocardial insufficiency. It makes no difference the cause of that, if there is a myocardial insufficiency, give the patient digitalis and the disease will take care of itself.

I didn't expect to discuss Dr. Rembert's paper. I was very glad to listen to it. It was a splendid paper. He always does give us a good one. If I have added anything to it I am rather fortunate, I think.

President Frizell: Dr. Rowland has been a great student of digitalis. May I ask you what preparation of digitalis you use, powder or fluid?

Dr. Rowland: I wouldn't depend on any preparation except the pharmacopeial, the tincture. None of your proprietary preparations for me.

Dr. T. D. Bourdeau (Meridian): I haven't any discussion to offer because Dr. Rembert presented such a thorough and complete discussion of this condtion. I simply rise to add my word to his to impress upon us all to be on the lookout for coronary sclerosis and thrombosis, because it is evidently much more common than we know about. I agree fully with what both of them have said about signing a death certificate as acute indigestion, when it is a fact that most of these deaths are either angina pectoris or coronary thrombosis. The differential diagnosis is sometimes very difficult.

I have in mind one case that I saw that was brought in with what the surgeons called an acute abdomen or some acute surgical condition in the upper abdomen. The doctors brought him in and wanted him operated upon immediately. The case was brought to Dr. Hoskin of Meridian. He very wisely, I thought, refrained from surgery. It turned out to be a nephrosis case with coronary thrombosis. The patient lived a couple of weeks, and presented a classical picture of what Dr. Rembert has shown, with gradual heart failure.

I haven't anything original on it, but it is a condition that all of us should be on the lookout for and not class these patients as having some obscure intestinal or stomach trouble and let them die without any effort being made to do something for them.

Dr. W. H. Curry (Eupora): I want to make mention of one case that I had two years ago in a gentleman aged sixty-five, whose blood pressure was 250 systolic. I thought I was going to have an occlusion of the coronary artery. It seemed very likely. These symptoms Dr. Rembert has gone over were very pronounced in this gentleman and I thought I was going to have to sign a death certificate very promptly for him. He lived near me in town. I was called very suddenly to see him. He had all the symptoms of collapse and severe pain. I had never been able to get the blood pressure down. It had been running high for several months.

I proceeded to put him on digitalis and for the last two years I have been giving him digitalis. He takes fifteen drops three times a day, and when he discontinues it he gets in a pretty bad condition. By giving him fifteen drops three times a day, he is fairly comfortable, goes along pretty well, and his blood pressure has not gone higher than 160 at any time during the last two years.

Dr. G. W. F. Rembert (closing): I appreciate the discussion very much. I will say that Dr. Bourdeau is right as to the incidence, and again I want to impress the fact that it is a condition rather frequently found and that the diagnosis is not one that can only now be made at autopsy. Those cases which I spoke of, including Krehl's comments and the quick death, are the cases that die right now. When you think that the death rate is not over fifty per cent that gives us a chance to watch these cases, study them out and do something for them.

I think using digitalis to lower the blood pressure works out very well at times, and yet, that opens up a line of thought as to why high tension and how digitalis works—but it does.

And now with regard to what my good friend, Dr. Rowland, had to say, I think perhaps I didn't make myself clearly understood.

As far as the use of adrenalin is concerned, it was my purpose, and I think the paper so stated, in case of emergency in which it looked as though the patient were surely going to die to give adrenalin intracardiacally. It is true we expect the peripheral response, but it is a case of "any port in a storm." If you can whip the heart faster than you can whip up the circulation, you might carry it over to the point to which it can go ahead. If you stop to think, there is a tremendous shock, and I think the adrenalin is very splendid for combating shock.

As regards digitalis, I believe it is rather the concensus of opinion today to use digitalis in

most cases. Whether it stores up energy or increases the caloric intake and favors nutrition or, by its specific effect, slows conduction and lessens the heart rate in any given case is a matter of question. However, when used, it will be best that the Eggleston method should be applied and while there are several forms and preparations of digitalis I have preferred the fresh powdered leaf—either in pill form or in capsules—care being taken to see that the drug is well standardized.

In administering digitalis it is not only necessary to secure "digitalis effect" but to make sure that a sufficient amount is given either daily or at other specified times to insure the "maintenance effect' and which, with the average adult will be between ¾ to 2 grains of the powdered leaf daily.

ALLERGIC REACTION IN HAY FEVER AND ASTHMA*

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NEW ORLEANS.

It was with a great deal of curiosity not ummixed with uncertainty that we undertook to study the course of reaction in some 2000 cases treated in the hay fever clinic. We knew in a general way what the result would be, but in some cases, progressing remarkably well, we found the skin reaction mounting and in a few cases where we found hay fever undoubtedly established, the reaction was absolutely negative. These results, apparently contradictory, became clear as we studied the nature of the process involved; we soon realized that this reaction was not a simple process but one which grew more and more intricate as the research progressed.

OBJECT.

It is not our claim to advance a solution of all processes of allergy which have for years puzzled experts but only to present definite facts collected and set forth our explanation of these facts. We feel that the conclusions reached will be of service to those interested in the allergic process.

The object of this paper is to bring home the fact that the intradermal pollen reaction forms a valuable aid not only for diagnosis and prognosis but with certain limitations indicates from year to year the progress of the case and the efficiency of treatment. Though we hoped that all those who improved would present a descending reaction and those without sufficient treatment or resistence would present an ascending reaction we met with many exceptions. Here is a chart (F) of a severe case whose improvement was such as to require hardly a dozen treatments within the last four years, whose reaction is mounting from year to year; clinically well, though at first glance his chart would indicate the contrary.

Here is the chart (E) of another equally improved patient whose reaction has practically not moved a point. We had expected that well marked cases of hay fever would invariably present a positive reaction and yet, here is the chart (C) of one whose reaction at first was nil, appearing only after the institution of treatment, steadily ascending for sometime before finally coming down! Where can we find an explanation to cover these cases?

EXPLANATION OF REACTION.

In hay fever and asthmatic conditions it is presumed that a specific ferment develops in the tissues which split the foreign protein, this not necessarily being a new substance but one which may represent a different arrangement of cell elements. When this process is completely accomplished the patient is immune; when it is incomplete, or the process not even attempted, the patient becomes sick. The split protein alluded to above may be considered to form two elements:

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First—A non toxic which produces the characteristic hay fever reaction varying in characteristic with each substance tested.

Second—The toxic part which produces the general symptoms—the grave blood and tissue changes—the physical and chemical changes encountered in hay fever being the same in all cases. This theory fully explains the case represented in the following diagram, (F).

This patient is well, that is the toxic part of the split protein no longer bothers him; but the non toxic part is more active than ever before; this to my mind is the only explanation possible of an otherwise very puzzling case.

Another curious phenomenon in allergic cases in the fluctuations observed in the clinical aspect of the cases according to the seasons.

Here certain articles of diet may precipitate an attack of hay fever or asthma at one time and not at another, though the allergic skin reaction will remain constant whether the attack is on or not. What takes place in these instances is that the metabolic products from ingestion are added to the toxic element of the split pollen proteins forming a dose too large for the patient to combat.

ALLERGY AND ANAPHYLAXIS.

This brings us to the discussion of allergy. A person may be allergic all his life and it may be that he never will feel it unless an anaphylactic reaction forces him to realize it at a moment's notice. Allergy is a potential condition; anaphylaxis is decidedly kinetic. A person may be, and usually is, born allergic but he acquires anaphylaxis when weather conditions, locality or distribution of pollen affect his metabolism, an expression of which may be evidenced by asthma, hay fever, angioneurotic edema, urticaria, eczema or epilepsy. Many definitions of anaphylaxis are found but the one we have in mind in these pages is that which is taken as an expression of an allergic reaction.

The sensitizing element may enter the system by inhalation in the form of pollen or house dust, producing typical attacks of hay fever or asthma manifesting themselves at special seasons; or entrance may be obtained by certain foods through the digestive tract overwhelming the hay fever sufferer who is already taxed to his limit during the pollenating season. Hidden focal infection, as is well known, may likewise light up and maintain the process.

METHOD OF TESTING.

The method of testing in all our cases has been the intradermic; when solutions stronger than 100 units to the cc. were used, due allowance was made. If 1/20 of a cc. or 5 units produced in twenty minutes a wheal less than 0.3 cm., the reaction was not considered. A larger area, or redness with pseudopods, was interpreted as a reaction: 2.5 cm. being marked 100; smaller areas were tabulated accordingly. All 3 classes of pollen found in our section were tested for, because it very rarely happens that an individual shows a reaction to one form of pollen without responding to other varieties though not necessarily in the same degree. Moreover, as house dust containing emanations from animals etc., as also food were found possible sensitizing agents, these were included in the tests. Many failures in curing allergic cases have undoubtedly been due to the fact that attempts were concentrated to eliminate one cause and other causes equally at work were entirely overlooked. Look for and attempt to remove in all cases not only the main causes but all other agents which may sensitize the patient. These sensitizing elements may enter not only by inhalation but by ingestion and infection.

In the order of their importance they are classified as follows:

Pollen
Epidermal dust from animals etc.
Food and
Closed and incompletely drained foci.

Many cases refusing improvement with extract alone quickly responded when freed from feather and wool dust and placed on a suitable diet.

The tests are carefully recorded, uniformly applied, and interpreted and entered before the previous reading is consulted or the progress of the case ascertained. We seldom encountered a severe general reaction in our tests but occasionally in the course of treatment a severe reaction may be encountered. So it may not be amiss to pause here for a short spell to discuss this disagreeable phase and review the means to combat it when it does appear. A reaction exceeding 2 inches and persisting more than 24 hours is considered a severe reaction. A rash, local or general may be seen;—nausea, headache, vomiting, or even collapse may appear. On the first warning, administer a quarter of a cc. of adrenalin and repeat in a short interval if necessary. The test should always be applied intradermically, in this way the absorption is slow and the reaction easily controlled.

CAUTION.

We do not test cases whose resistance is too low or who have just recovered from an attack or to whom adrenalin has recently been administered.

SUMMARY.

From a lengthy and exacting scrutiny of the rich material studied when handling the 4000 cases during the past 14 years, we were able to divide the expression of the reaction into 5 groups each of which brings out facts of special interest.

First—The groups where reaction and chemical course ran parallel. Classes A. and B.

A. Class A. by far the largest, represents 69 per cent of the cases studied. The cases entering this group show improvement in all reactions and their clinical course followed a steady improvement; 15 per cent of these cases remaining free from recurrences. Here the toxic and non toxic elements follow a parallel course. All charts marked A. represent improved or cured cases. The straight line indicates the first series of test; the stars, the second series, the interrupted line, the third series, and in some long standing cases we were able to obtain a fourth tracing shown by the heavy black line. The tracings spanned by many years emphasize the fact that patient and persistent efforts were required to obtain results. Cases of apparently hopeless asthma of over 20 years standing required five or six years of constant treatment to obliterate the reaction.

B. The series of charts marked B. show the reverse of chart A. and form 6 per cent of the cases tested. Here due to insufficient or irregular treatments or lack of resistance the clinical symptoms remain stationary or increased, the reaction showing the gradual rise of susceptibility. All the charts marked B. also indicate that the toxic and non toxic elements went hand in hand.

C-2—The Group C. where the reaction rose before disappearing though the patient showed steady improvement. This series represents 2½ per cent of the cases tested and is interesting because it partakes of the nature both of A. and B. classes. Apparently these patients before becoming definitely immunized show a negative phase indicated by a rise to be followed later by a definite fall in the reaction.

D-3—The group D. where only one reaction showed improvement while the whole clinical course was clearing. It is in these cases (8 7/10 per cent) that the toxic and non toxic element of the reaction do not work in harmony.

Before becoming perennial, hay fever and asthma cases are always seasonal. In

this fourth class we see a promise of return to normal by a falling off in the spring reaction alone. With the more potent pollen suspensions now being tried, we hope a return to normal likewise of the fall reaction.

E and F-4—The groups E. and F. where anomalous curves are seen the reaction remaining stationary or even rising though the patient is steadily getting well. These curves look mysterious and would be difficult to understand did we not realize that in exceptional cases the toxic element is neutralized but the non toxic element remains active for sometime. The case represented in E. is free from symptoms but the reaction has not varied.

Chart F. represents an individual who since 1924 has required less than a dozen treatments but whose reaction is steadily mounting.

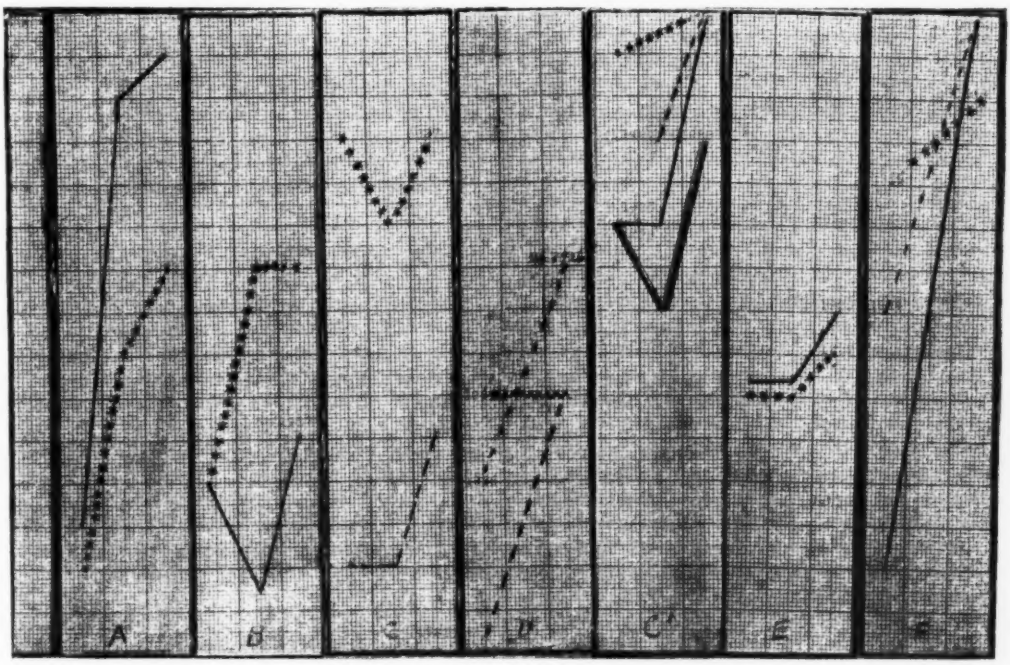
G-5—The last group G. where the cases gave no reaction to pollen tests and proved to be allergic to food only.

Chart G. is that of a case of asthma due to food allergy. Here, as would be expected, all the pollen reactions are negative.

CONCLUSIONS.

From a study of these charts we feel justified in drawing the following conclusions:

1. The allergic reaction of hay fever diminishes as the immunity increases.



Straight line indicates the 1st test applied.

Stars indicate the 2nd test applied.

Interrupted line indicates the 3rd test applied.

Each space represents 5 units.

(1) Charts showing the toxic and non-toxic elements of the split protein moving in the same direction.

A. Toxic and non-toxic element falling as the case improves. Patient with fall hay fever 11 years duration.

B. Toxic and non-toxic elements rising as the case fails to improve. Perennial asthma in an aged woman of 27 years duration.

C. Allergic reaction at first absent; under treatment it rose to 60, then fell as the case improved. Perennial asthma of 28 years duration.

D. Only spring hay fever improved at present. Hay fever of 7 years duration.

(2) Charts showing the toxic and non-toxic element of the split protein not moving in the same direction.

C. 1. At first the reaction rose though the case showed a steady improvement. Asthma and hay fever of 33 years duration.

E. Reaction stationary though the case is clearing. Asthma and hay fever of 27 years duration.

F. Reaction rising though the case is practically well. Fall hay fever 39 years duration.

2. Susceptibility may exist with inability to produce a response.

3. Susceptibility may have existed but immunity having been induced, no reaction is obtainable.

4. The allergic reaction may disappear for one variety of pollen and not for the others.

5. Reaction corresponds to clinical history.

6. Reaction takes years to disappear while fluctuations at short intervals do not form a good indication of improvement.

DISCUSSION.

Dr. F. M. Johns (New Orleans): Dr. Thiberge's work in hay fever and asthma extending over a large number of years during which time thousands of patients have passed under his observation deserves more than passing mention, and I am only too sorry to mention that I am not well enough versed in the science of allergy to appreciate to the fullest some of the remarkable vagaries of the skin reactions he has told us of tonight.

Just why we should be allergic or not is one of the most fascinating subjects confronting immunologists today. Heredity may explain some of the facts—but the variations in susceptibility to anaphylactic response within the individual from time to time is more than a puzzle. Dr. Thiberge explains this on the theory of overloading —"an excess of toxic element from indigestion," but is it not also true that the skin area subjected to test is always "overloaded" when a test is performed? It's my personal feeling that the gross reactivity of epithelium to specific irritation is last in the realm of colloidal chemistry, and that there is a yet unfound chemical whose depletion from the epidermal cells lowers their reactivity to any form by stimulation. How else could we explain such abberant results?

Again an increase or decrease of the positive skin reaction may be noted either with or without treatment—so that I doubt whether the clinical course of the diesase can be guaged at all by such reactions. I hope such a statement will not deter Dr. Thiberge in the pursuit of still more information by a continuance of his arduous labors, for it is only by the analysis of a large amount of such data that the profession can ever arrive anywhere.

Dr. John A. Devron (New Orleans): Dr. Thiberge had a wonderful paper—I congratulate him. I wish to say a few words about allergy regarding treatment of skin diseases.

Food allergy is a frequent cause of symptoms in adults as well as children and it is difficult in many cases to determine the cause of the allergic symptoms, but with skin tests I have found such common foods as milk, eggs, wheat and sugar give positive reactions. I use both the cutaneous scratch method and the subcuticular tests. Even when skin tests are negative, changing diets have a wonderful effect in improving the lesions. In 309 cases of urticaria only 80 per cent gave positive skin reactions.

Hazen says allergic dermatitis may be local or general, viz.: urticaria, erythema multiforme (Boaz cultivated bacillus perfringens from blood), purpura, and even some cases of lichen. Many cases of infantile reflex eczema as well as dermatitis herpetiformis yield to diets. Allergy is also manifested by pollens, drugs taken internally, animal hairs or dandruff, house or street dust, fur, wool or dyed goods and household articles such as feather pillows, hair mattresses and woolen blankets. Bacterial substances, focal infections, irritability of the vegetative nervous system, physical agents such as heat and cold, endocrine disturbances, all cause allergic reactions. The successful dermatologist must work out the provocative substances if he expects a permanent cure.

Blood pressure, history of the case, telling the patient not to worry, is silly. Calcium lactate, ultraviolet light, lavage of the colon, all help to relieve. Desenitization can be accomplished and it is a satisfactory method of treatment. In syphilis some European doctors use an antigen obtained by vesication of secondary syphilis, employing it by intradermal injection in the hope of creating an ellergic reaction to relieve the syphilis.

Allergic reaction may follow three courses:

First: Disappearance in from two to three days.

Second: Partial or complete resolution followed by a recrudescence of a specific type.

Third: An intense reaction with progression and activity over a long period of time.

Dr. E. D. Fenner (New Orleans): Did I not feel quite certain that my friend, Dr. Thiberge, will understand that this contribution to the discussion is not given in the spirit of levity, but because to my mind it is so extraordinary a manifestation, I would hesitate in what I am about to say.

Recently, an educated, extremely intelligent and very highly organized woman told me that she had been a victim of hay fever and that she had consulted half a dozen doctors, been treated by Dr. Scheppegrell, tested out, and received 49 injections for hay fever, yet without deriving any benefit of any kind. A friend of hers told her that Christian Science would cure her. So she evoked the services of a Christian Science operator, who did not appear to be harmonious and who did her no good. She discarded his services and employed a woman Christian Science operator who gave her a number of treatments. Then for two and a half years, after having been the victim of hay fever until she was nearly frantic, she never had a symptom. She told me, however, that during the past three or four months there has been a recurrence of the hay fever symptoms, which is annoying her a great deal. "Then for God's sake," I asked her, "why don't you get another Christian Science healer?" She replied that as yet she had not made up her mind to do that.

This history, which I believe to be perfectly honest, struck me as being exceedingly interesting. To a hay fever man it might perhaps be easy to interpret, but to an orthopedist like myself the testimony of this woman certainly is puzzling and very hard to understand. Can it be some unknown agent, perhaps a psychic condition, complicating some of these cases? I certainly do not question the sincerity of this patient, yet cannot think that hay fever ought to be cured by Christian Science.

Dr. Narcisse F. Thiberge (closing): With reference to the case cited by Dr. Fenner, I wish to say this. When talking Christian Science you are discussing a subject which I have not studied and which I do not intend to take up. My explanation of the case, as I see it, is this:: I have handled many cases of hay-fever and when they were passing through the anxious state of the reaction they considered themselves as not benefitted, or even made worse by the treatment. I have not been able to follow up all these cases, as some did not report for further treatment, but those that I have been able to keep in touch with an ultimate improvement or cure has been the almost invariable result; therefore the deduction in this case, as in the others, is that while going through the process of stimulation to treatment, patients probably react more energetically than we realize, but when they stop, they feel the benefit from the treatment, which manifests itself in one or two years. Such is the conclusion that I have been able to establish to my own satisfaction, and to that of a good many people who have followed with unbiased minds these cases—that they always showed improvement sooner or later. The coincidence of a Christian Scientist taking it just at the psychological moment reminds me of what old Dr. Faget said: "Blessed is he who gets the patient last, because he gets the credit for everything."

What Dr. Devron brought out about the food of the mother for the nursing child is a point that deserves a great deal of attention. In cases of allergy in nursing children, do not test the child, but the mother; it is a very good point to bring out.

I have to thank Dr. Johns for his very able dissertation of the case and I want to say that we have repeatedly tested cases, tested them a sufficient number of times to realize that the treatment by itself cannot be accused of producing allergy in an individual. It can stimulate a dormant allergy, but it cannot produce an allergy in a patient who is not already allergic.

PUBLIC HEALTH MEASURES AND METHODS IN PREVENTIVE MEDICINE.*

F. MICHAEL SMITH, M. D.,

VICKSBURG, MISS.

Not long since a health department, or health officer, functioned little other than to maintain a strict quarantine over contacts with communicable disease, or more often perhaps he was called upon to correct outstanding nuisances as the disposal of putrefying carcasses, to remove unsightly rubbish, clean vacant lots of weeds, tin cans, etc. In the light of modern sanitary teaching many of these activities were of little, if any value, in abating or preventing sickness. But in the passing of the years bacteriology, through the labors of the masters, gave to medicine and the discerning world authentic proof of the causative factors of many diseases and isolated the pathogens of many communicable diseases such as typhoid, diphtheria, tuberculosis, syphilis, meningococcus meningitis, etc., and forever dispelled the mysteries and morbid fancies

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that had hitherto possessed the medical as well as the lay mind. Theories of miasma, foul air, witchcraft, hoodoos, offended divinites, fomites, etc., as causative factors of disease gradually gave way to the authentic teachings of scientific medicine.

It is indeed gratifying to public health workers to note the significant remarks of our President in his inaugural address when he states, "Public Health Service should be as fully organized and as universally incorporated into our governmental system as is public education. The returns are a thousand fold in economic benefits, and infinitely more in reduction of suffering and promotion of human happiness."

It seems the day has dawned when the public realizes more forcefully then ever the truth of the oft quoted statement, "that government, when founded on the principles of equity and justice guarantees to its subjects liberty and protection of life and property," the protection of life not alone from the assassin within or a foreign foe, but protection from all forces that undermine or shorten the span of life. Hence the establishing in practically every State of the United States, a Department of Health to which by legislative enactment various powers are given for the suppression of epidemics, prevention of disease and promoting of the strength and vigor of its citizens.

In our complex social organization by virtue of the propaganda of various cultists, sects, fanatics or conscientious objectors, the question has been raised, should a government, by virtue of its guarantee, ever take life, deny liberty, or interfere in property rights when possession prevails? Likewise the question has been raised to what extent should a State function in safeguarding the life and health of its subjects, when the same State has licensed certain subjects to perform a seeming similar task and guarantees to them protection in their chosen vocation to which they have devoted time and means for the performing of the task? In a democratic government, like ours, which exists by the will and consent of the governed, we believe the first question has been satisfactorily answered by the courts of justice which have ruled that life is not guaranteed to any subject who has forfeited his rights to life by becoming a destroyer of the life of law abiding citizens, that no citizen can claim a constitutional right to liberty whose acts bring peril and hazard to the rights and liberties of others, nor can the possession of property unrightfully obtained be guaranteed at the loss of another citizen who formerly possessed same through lawful earning. Reasoning by analogy we think the second question might be as satisfactorily answered in a democratic government by stating, a State through its County Health Departments does not exceed its constitutional rights, neither does it usurp the rights of any individual or profession, nor does its actions in any way fall short of justice to all if its efforts are to prevent and control disease that by virtue of their communicable and fatal nature would be a menace and a hazard to the life of other subjects, and as long as its efforts are confined to this line of demarcation, the prevention of communicable disease and the increasing of the strength and vigor of the individual, the means and methods employed in our judgment should not be questioned.

The question formerly arose and may linger in the minds of some yet. How far should a County Health Department, or County Health Officer, go in the legal and ethical administering of serum or drugs? In considering the legality of an act we often desire a specific law for such action, but we find no such law given to the general practitioner of medicine for the administration of curative drugs, other than the law implies in his license to practice medicine, to use any and all curative means and methods that are not used in a way to jeopardize the life of a patient, but might restore health; so in the practice of preventive medicine, the health officer, who is a specialist in this branch of medicine, is legally within his

rights to use any method or means, serum or drug, for the prevention of communicable disease that is not a hazard to the individual or the public whom he serves in this official and lawful capacity. Ethically he makes no breach of ethics as long as methods and measures are for disease prevention.

Another question frequently asked and discussed by the medical profession relative to the public health activities of a County Health Department was to what class of individuals should he render this protective service, rich or poor, to the public generally or to children only? In our conception of public health it is a service and a duty the County Health Department is due all individuals alike and should in no way be considered analogous to a benevolent society, social welfare or charity organization, and in rendering this protective service to the wealthy or the poor no more pauperizes its citizens than does the protections given to every citizen through the State or County Attorneys in their advocacy for them before the courts, or rather in their efforts to prevent misdemeanors and crimes through the courts of justice, nor does it in any way render him a more dependent or worthless citizen, but rather inculcates in him a spirit of pride, a greater appreciation of a government that gives him a greater security against an unknown enemy that stalks through the land by day and by night leaving in his wake sickness and sorrow, death and fear.

In considering this question as well as all other questions of public health, we must not consider only the legal and ethical rights of the general practitioner or the specialist in preventive medicine, but the right of the individual citizen. The right of the public should not and must not be ignored, for not only has the progress in medicine, curative and preventive been made by the Fathers of Medicine, but it has largely been contributed to by the patient and oftentimes nonremunerative efforts of men of various callings and fields of endeavor, the scientist, the chemist, the sanitary engineer, veterinarian, agriculturist, scientific instrument builders, too great a number to catalogue; they have all contributed their effectual "bit;" the toiler in the field, the digger of ore, the accountant and clerk have all borne their pro rata of taxes that have made possible the Colleges and Universities that have been a means for our qualifications in our chosen specialties and it behooves us to render to them (the public) this meager portion of preventive service that a State is obligated to give.

But it should ever be borne in mind by the personnel of County Health Departments that their mission is health and prevention of disease, that there is all the difference in the world in preventive and curative medicine, that no official of State or national government should arrogate to himself the legal or ethical right in the practice of preventive medicine to treat pathological conditions or correct physical defects. The domain of surgery or curative therapy is never within the jurisdiction of his services.

When preventive medicine applied by all branches of medicine more nearly completely eradicates communicable disease the future ideal and vision of public health workers will be to build health departments whose aim and mission will be not to combat disease but to make possible and stable health.

President Hoover has most aptly expressed this ideal in his "Bill of Rights for the Child," when he says, "The ideals to which we should strive is that there shall be no child in America that has not been born under proper conditions, that does not live in hygienic surroundings, that does not have prompt and efficient medical attention and inspection, that does not receive primary instruction in the elements of hygiene and good health, that has not the complete birthright of a sound mind in a sound body, that has not the encouragement to express in the fullest measure the spirit within which is the final endowment of every human being." To reach such a goal we

TENTATIVE PROGRAMME OF MEASURES AND METHODS IN PREVENTIVE MEDICINE FOR A COUNTY HEALTH DEPARTMENT.

1. **Health, Education**
   - (a) Lectures, (b) Motion Pictures, (c) Bulletins, (d) Individual Conference, (e) Newspaper Articles, (f) Personal and Circular Letters, (g) Exhibits, etc.

2. **Sanitation**
   - (a) Private — Homes → (a) Excreta disposal system
   - (b) Public → Schools, Churches, Factories, Public Buildings, Hotels, etc. → (b) Water supplies; (c) Light and ventilation, etc.

3. **Food Supervision**
   - Inspection and scoring of all food and food product places, as Dairies, Pasteurizing Plants, Slaughter Houses, Meat Markets, Restaurants, Lunch Counters, Ice Cream, and Sausage Factories, etc.

4. **Epidemiology**
   - (a) 100% reporting by Doctors
   - (b) Case histories by Health Officer
   - (c) Isolation of cases by Health Officer
   - (d) Quarantine of contacts by Health Officer
   - (e) Release of isolation and quarantines by Health Officer
   - (f) Carriers and contacts sought by Health Officer
   - Specials
     - 1. V.D.
       - (a) Examinations, Wasserman and Kahn
       - (b) Prophylactics, (questionable)
       - (c) Treatment, only by Doctors and approved Clinics
     - 2. T.B.
       - (a) Education
       - (b) Examinations
       - (c) Placed in Institutions
       - (d) Home visits, etc.

5. **Immunology**
   - (a) Anti-typhoid—Typhoid Vaccine—3 doses, every three years.
   - (b) Anti-smallpox—vaccination—Successful Scar.
   - (c) Anti-diphtheria—Toxin—Anti-toxin—3 doses plus negative Schick.

6. **Child Hygiene and Maternity**
   - 1. Prenatal
     - (a) Examinations
     - (b) Advice with Parents
     - (c) Home visits, Nurse
   - 2. Preschool
     - (a) Examinations
     - (b) Parents visits to office
   - 3. School
     - (a) Examinations
     - (b) School records
     - (c) Home visits
     - (d) Dental okehs
     - (e) Health Buttons
   - 4. Nutritional Classes
   - 5. Corrective Measures (a) By Physicians (b) By Dentists, etc.
   - 6. Supervision of Midwives
   - 7. Certificates from Health Officer to re-enter school after being a contact or having had a communicable disease.

7. **Laboratories**
   - (a) For diagnosis of communicable disease
   - (b) For discovery of carriers
   - (c) For release of quarantines
   - (d) Analysis of drinking water and water of public swimming pools
   - (e) Analysis of milk (bacteria count, etc.)

8. **Anti-malaria,**
   - (a) Surveys and maps showing positive cases
   - (b) Drainage
   - (c) Oiling and Larvicide
   - (d) Home control; screening, breeding places, etc.

9. **Life Extension**
   - (a) "Birthday" or annual examination, made by doctors

10. **Vital Statistics**
    - (a) Births; making record and issuing Registration Certificates
    - (b) Deaths; making record and issuing Burial or transit permits, etc.

must have a working programme for the present, a programme that may be altered or made fuller to meet future needs, a programme that will meet the ideals of Newsholme when he states, "Preventive Medicine is the science of measures for the prevention of disease, and of measures which will serve to uplift the standards of health of each member of the community." This to our mind embraces all factors, psychological, educational and otherwise that enter into a public health program.

If you will refer to the supplemental sheet we have furnished you, you will see a tentative programme that we have submitted and you will observe that the proposed activities are brought under ten (10) major heads, many of which have one or more subdivisions. It might be of interest and profit to discuss in detail these major divisions as well as the subdivisions, but the time allotted us forbids, for a detailed discussion would necessitate a volume or volumes rather than a paper with time limitations, but permit us to say of the first heading, Educational Work, that an intensive and authentic educational programme continuously, faithfully and courageously carried on by means of lectures, bulletins, newspaper articles, exhibits and perchance the radio, but especially through the personal touch, will be found to be of inestimable value in the cause of public health and incidentally in the advancement of the medical art; for the fundamental principles on which medicine and surgery are based and upon which the healing art is made secure is, that there is a cause for every effect, an etiology precedes every pathology. Through the County Health Department these facts are constantly being instilled into the minds of the children of the land and into the minds of that great percentage of human beings who do not think deeply or soberly for themselves. This is the campaign of promise that bids fair to disconcert and route the fakers of medicine, the cultist, the charlatain, nostrum venders, faith healers and pseudo science professors who sorely infest the land.

We respectfully invite and solicit your careful study of the tentative public health programme for County Health Departments that we have submitted and urge your honest evaluation of its merits and demerits. Now in concluding this paper let us remind you that Watts has said, "The health of the people should be the first care of the State and the highest aim of scientific medicine is the prevention of disease, and the duty of the doctors is not only to cure disease, but to co-operate with the organized forces to prevent it." The burden of this paper might be said to be to show that a county health department in its inception or purpose is to be an official organization that all medical men of vision could endorse and support, that its personnel should be made up of public health workers of the medical, dental, nursing and allied professions, that their specialty was preventive medicine, a branch of the medical science, and that its mission of necessity is preventive medicine and preventive medicine must prevent or fall short of its high mission to the public who support it.

The building of sanitary privies will reduce the incidence of typhoid, cholera, dysentery, tuberculosis, trichinosis, hookworm, and other intestinal parasitic diseases. Food control, communicable disease control, immunization, antimalarial work will all reduce the incidence of disease, and will also reduce the incidence of a devitalized and impovished citizenship, then if there were no altruism in the medical man and his viewpoint were always selfish would he be the loser? Who would select an impoverished people for a financial success in the practice of medicine? Could the work of a health department be detrimental to the practicing physician when it hopes to get all correction and remedial measures accomplished through him and he alone is the arbiter of all fees and all favors? Is it of any consequence to the medical profession who treat and correct pathology to observe that through the partial efforts of preventive medicine the time of life or rather life expectancy has been tripled in the past three

hundred years? Eighteen years was the life expectancy then; today it is fifty-eight. With this total of years added to human life the physician has three times as long to care for the maladies and accidents of life as he formerly had.

Now the well equipped, thoroughly trained, efficiently specialized physician of today has naught to fear from the sometimes hoisted fallacy of "State Medicine" or the legal and legitimate practice of preventive medicine, for as long as new life comes to gladden the heart of motherhood, as long as ingenious and industrious man builds more deeply and at greater lengths and to greater heights the industries of the world, the concomitant accidents, hazards, and degenerative maladies will ever engage the careful attention of the painstaking physician and compensate him most acceptably.

We trust this paper may bring a clearer understanding of the purposes and legitimate activities of an official health department, especially if any such clarification were at all necessary. Oftentimes a misunderstanding or misinformation will engender criticism, dissatisfaction and intolerance, while a clear understanding and correct information may bring approval, unity and co-operation.

This is found to be almost universally true of real men, or true men, who look for the high way of life, who travel not the low and who recognize that "to every man there openeth a high way and a low, and every man decideth the way his soul shall go."

DISCUSSION

Dr. J. W. Lipscomb (Columbus): Mr. Chairman, as our good friend Dr. Dan Williams said about the Chairman's paper, it is practically a closed issue when it comes to the discussion of this paper. I don't see where we could very well add to or take from, if we are honest men.

Dr. Smith said: "Would any man choose an impoverished people with whom to locate and practice his profession?" May I tear a leaf out of my own life's history for you, going back some twenty-seven years. It is a true story, and whether or not you believe it, you will, at least, if you do not believe it, agree that I am an accomplished prevaricator.

I was called into a family on the tenth of October to see a case of typhoid fever. From the tenth of October to the fifteenth of the following March I was at that house from one to three times a day during which time I treated five cases of typhoid fever. They all got well. I am very fortunate in being able to say that.

I received some little acclaim as a fever doctor. My remuneration, going back to Dr. Smith's point, was a half-starved, tick infected bullock that I sold for four dollars. I would rather live under the regime as brought out by Dr. Smith.

There comes a time in the affairs of all wise men when an all-wise Providence says: "Thus far shalt thou go and no farther." That seems to be the key to the situation.

I don't believe that any educated, rational thinking human being in this day and generation could gain his consent to in any way knock, as we say, preventive medicine, but how far? I think the time is rapidly approaching, and I hope that our good President quoted from by Dr. Smith with reference to the rights of the child, may before he leaves office in some way or somehow get us a seat in the great cabinet of the United States and have a department of health beginning there and coming on down the line.

You doctors, as I, received a letter sometime ago from the Anheuser-Busch Brewing Company. The point I want to make is that they said the government had practically confiscated their business. We all know there are many, many bartenders throughout the world now without work.

I claim that if the old-fashioned way of practicing medicine was in accordance with the old-fashioned way of tending bar, then we have advanced that, and if we are out of work, then we ought to be out of work and submit to progress. Therefore I think that Dr. Smith has certainly given us a wonderful and instructive paper, and you know and I know and we all know, demonstrated here on this floor from time to time, that there is not the least bit of curative medicine advocated or put forth or practiced by any of us.

As to this diagram (I call it a diagram because when I went to school that is what it was called, but I believe he called it a table) with those ten major heads, I do not think after a careful digest of this paper and of this diagram (the doctor sent me his paper and I read it and enjoyed it) that we as practitioners, members of the State Medical Association, can find any fault.

I want to go a step farther. I want to go back to my friend, Hardie Hayes' veneral clinic, and

I want to add to it and I want to see it practiced all over the state of Mississippi again. I really think as Dr. Smith or Dr. Applewhite brought out in his paper, there is a very, very grave and excessive mortality, and to say the least, very, very grave and horrible afflictions that come into the affairs of men through that particular place. I should like to see that added to this. I know Dr. Smith did not want to add that, because he considered practicing medicine a curative medicine.

I want to congratulate the doctor and I commend his paper to you; and I commend the thought to you, or rather suggest the thought, do not be afraid of state medicine, because I do not think there is any danger of state medicine as long as you or I, or anybody in this house lives.

Dr. L. S. Lippincott (Vicksburg): I can't give you any of the oratory that he preceded me. I am very happy, however, to have this opportunity of congratulating Dr. Smith, not only on his paper, but on the service that he has rendered in Warren County in the last year and a half to two years.

At the time of the flood, Warren County was without a full-time health officer. The need of one was very apparent at that time. The county society then took over the work that should have been done by a health officer, and in doing that saw what we missed, what we needed.

Following the flood, there was a special opportunity to get a health officer in Warren County, and the county society practically to a man backed that movement. I am happy for that.

When it came to choosing a man, we had some doubts. Conditions there were not the same as in all places. I suppose you would all say the same thing. We knew we had to have a man who would really do something and do it in the right way. That matter was talked over with Dr. Underwood and with his department. Dr. Underwood and his department chose Dr. Smith for us. We know now that they could not have done better. They ought to be congratulated on the work that has been done in Warren County at this time.

Today I just want to say a little about the laboratory in connection with the public health department. I have done some of the work for the Warren County Department. I think the laborotary is an essential part of the program, but in saying that, I think the laboratory should confine its activities to public health which has to do with prevention, just as Dr. Smith has said and as he has practiced. He has not used the laboratory for other purposes.

He makes it a point, first, to diagnose a communicable disease. The laboratory here is a big help. In a number of the diseases, such as smallpox, possibly scarlet fever, chickenpox, and that type of disease, the laboratory isn't of so much service, but in diphtheria, typhoid, paratyphoid, dysentery, meningitis of the meningoccocic type, the laboratory can make the diagnosis for the public health department and should be used for that. It is possible that syphilis should be included. If you do, it is my opinion that you should include only active syphilis, syphilis with open lesions which are a danger to the public. If you take all the syphilitics, the old and the new, you have a much larger problem.

There is a question in my mind whether active gonorrhea should come under this head, but it could very well in the acute stage.

In regard to this discovery of carriers, you could include practically the same diseases and this would include contacts as well as actual carriers. We had an experience in Warren County this last year which brought out the point of necessity for a laboratory and for a laboratory that is equipped to go into the game at any minute. We were building a bridge across the river. The company that was putting down the caisson had something like 250 men working. A case of meningitis developed among those workers. It wasn't recognized as meningitis. A man died from the disease and it was recognized only at autopsy. Even then we might have missed it because we were looking for something else, and finally, not finding what we were looking for, we did find enough pneumonia to have killed the man and we almost made up our minds not to go into the head. When we went into the head we found extensive meningitis. The body had been embalmed so it was impossible to get cultures. We found, however, a few typical meningococci in the pus cells. It is of great importance to discover something of this sort for a company with a big payroll to avoid excessive loss of time.

By having a laboratory equipped, you can go right through those workers and find all the men who were working with the man who was sick. By taking nasopharyngeal cultures you can pick out the carrier. In this case we made some 250 cultures from the office people as well as from the caisson men. We found one carrier. He was isolated and we had no more cases of meningitis occurring in that company.

Various sorts of treatments to the nose and to the throat were given which helped to satisfy public opinion, but which to my mind were not particularly necessary other than to keep people quiet. People are very likely to become disturbed over meningitis much more quickly than over some other diseases. The laboratory was of value in this case.

This laboratory is of importance in regard to release from quarantine. One negative culture isn't enough probably in any of these diseases. It is necessary to have two, preferably three, taken at different times, with care to take the cultures before some local treatment has been given. In fun, I have accused Dr. Smith at times of trying to get rid of diphtheria carriers by taking the culture immediately after the throat was sprayed. However, I did not mean that, because he has never done it. However, it is possible to get negative cultures if you are trying to do so.

Next, the analysis of drinking water is most important. An analysis once in two weeks or once a month is not sufficient. Drinking water, especially the supply for a big town or city, and especially if that supply is drawn from contaminated sources and has to be treated, varies greatly from day to day. That should be watched carefully. Probably every day or every few days is not too often for examination.

May I include with the drinking water, although Dr. Smith did not put this down as a special heading, the swimming pool. We are having much said about swimming pools in recent years. It is a fine thing to have a swimming pool, but people in general think that any sort of water is all right to swim in. Personally, I can't see any reason why the water in which you swim should not necessarily be just as clean and as wholesome as the water you drink. I do not believe anyone ever went in swimming without getting the water in his mouth, and if he gets it in his mouth there is just as much danger as though he drank it purposely.

The analysis of milk, of course, includes the bacterial count and some chemical analysis. In connection with the analysis of milk, we have to consider undulant fever, and we are going to have to consider it more according to what has been written. Undulant fever has not been recognized very well, but apparently it is rather widespread. Of course, it isn't looked for in doing the regular milk examination, but is referred back to the cow. We should be looking for it in people who are suspected of having typhoid or who have unaccounted-for fever.

Under child hygiene and maternity, the expectant mother, of course, should be examined for syphilis, for tuberculosis, and probably for gonorrhea; syphilis principally, because if you can detect syphilis in the mother you can do a whole lot to stop the disease.

In pre-school and school children in some counties, the examination for parasites is especially important. In Warren County we have very little hookworm, although every now and then we do find one or two cases.

Probably a complete examination should include the stool, and examination of these children probably should include a search for malaria. By a search for malaria, I mean a real search and not just glancing over a lot of slides. Probably in the backward child in school, examination of the blood should be made for syphilis.

In the supervision of midwives, syphilis, of course, should be looked for.

Dr. Smith includes life extension, covering a periodic health examination. In my opinion, at present at least, probably this should be left to the family physician, provided the family physician will make the proper examination. A lot of this work has been held up, has been discouraged by the fact that the family physician does not take it seriously when his patient comes to him. The patient probably has read something in a magazine relating to the fact that he should have an examination on his birthday. He goes to his family physician. The family physician says, "I know you are all right. You don't need an examination." That isn't the attitude that should prevail. If the health department can teach that family physician to take this man seriously and to carry on the examination as suggested by the American Medical Association, that could be well done by the family physician.

In these examinations also the laboratory plays its part. I don't think any of these examinations are complete without a urine examination, Wassermann test, and other examinations, according to what is found or suspected.

In older people, blood chemical examinations to determine the condition of the kidneys and the possibility of diabetes are important.

There is just one other function which Dr. Smith did not put down on his program. He has just recently done an excellent piece of work and that is in protecting the practice of medicine in the county where he is carrying on.

In Vicksburg, for some ten, twelve, or more years, there has been a negro ever there calling himself doctor. I think possibly he is a pharmacist. He got out some sort of patent medicine which he was selling through the mail. He used a crystal-gazing ball and some other apparatus. Some five or six years ago, the post office authorities tried to get him for using the mails to defraud. At the time, the post office inspector was through, we got a number of copies of the letters that had been sent out. The difficulty lay in the fact that everyone whom this man treated said he had done well for him, that he had not been defrauded. They made up their minds that they could do nothing at that time and just filed away the matter.

As soon as Dr. Smith heard of this condition—incidentally, the county health officer and the county society had tried to do something before and were unable to do anything—he went at it in the right sort of way. He took it up with the county attorney. The first thing we knew, this man had shut his office and so far as we know has stopped doing business. As Dr. Smith says, it is easier for the county health officer to do that with the jury than it is for the county society, for the reason that as soon as the county society goes before the jury, the defending lawyer says, "Here are all these doctors coming up here; they are just jealous of this man. He is making money that they want to make and they are trying to put him out of business." It is pretty hard to get a verdict from the jury.

The county health officer is not practicing medicine. His is a disinterested party. He is protecting the people. It worked out excellently in this particular case.

I enjoyed Dr. Smith's paper. I have enjoyed working with Dr. Smith. I offer congratulations to him and to the state health department.

Thank you.

Dr. H. L. McKinnon (Hattiesburg): I am not up to discuss the paper so much as I am to seek information. In my county we maintain a rather expensive county unit. During the war this unit treated venereal diseases, which meets my approval thoroughly. We had a male technician, trained under the supervision of our county health officer, who treated these indolent cases of venereal disease. Therefore, we practically rid our neighborhood of venereal disease. This man was let out from the unit and a female technician was put in. Then it became impossible for us doctors to refer our work of that character to this unit. I am not criticizing. I am merely asking for information as to whether that is the right thing to do.

During the war about 32 per cent of our men were sent back home because of venereal disease. It happened to be my privilege to be an induction officer in the army for a while and a dreadful amount of this stuff came under my observation. It was my painful duty to send a bunch of men back home as men who were incapacitated for regular army duty. I got the impression there that venereal disease perhaps was one of the biggest factors we have confronting us from a danger standpoint.

It is not the negro altogether, because the percentage ran very near equal as to whites and colored in my experience as a receiving officer.

A great many of these whites, as well as the colored, who have come under my observation are not able to pay for treatment, and a busy man is normally not going to take time to treat those cases, especially to furnish them medicine.

Personally, I treat practically no venereal disease so it affects me in no way other than being a benefit to the neighborhood.

I should like to hear discussed whether or not it is the duty of our county health unit to have a man who is capable as a health officer, and to have under his care or observation a technician to do this work. We are very fortunate in our county in having a man who is very capable and who has carried on this work as well as it could be carried on. I don't think we have any criticism at all of our men, with the exception that in my opinion it is better if venereal work of this character is treated there. I certainly do not advocate treating those cases that can pay for treatment, but I do feel these indolent cases that are going untreated, going on and on until the disease runs its course, and in the meantime being scattered broadcast and endangering not only those with whom they come in contact but those people in our homes, should be treated. Just recently I had my cook examined and found a three plus Wassermann.

I should like to hear this idea discussed, whether the county units should take up these cases and treat them because the profession can't. They haven't time and naturally are not going to spend the money which is necessary to treat them at their own loss of time and money.

Dr. F. M. Smith (closing): I am very appreciative of the discussion given by these men, Dr. Lipscomb, Dr. Lippincott, and Dr. McKinnon.

With regard to life extension or annual examination, that is not as plain as I had intended it to be. I meant that the health department should do a work to accomplish results, but that all examinations should be done through the medical profession and those men who were thoroughly prepared to do that work.

Just at this time I refrain from a discussion of the venereal disease problem, or that part a health department should perform in the suppression of same. However, I am glad this subject has come before this body, and I suggest that we wait for the matter to be discussed later or after my old friend, Dr. Wenger, Director, U. S. Public Health Service, V. D. Clinic at Hot Springs, Ark., has read his paper, which, I am informed, will deal to some extent with this special problem. As I understand him and his recommendations, he advocates V. D. Clinics conveniently located throughout the state conducted by a clinician or physician who is paid for his services. That the health officer in this district

merely supervises the cases in a way somewhat similar to other communicable diseases. That is, after a patient quits his family physician, will not take further treatment from him, or if he fails to appear at the V. D. Clinic after having been admitted upon proper recommendations, the health officer sees that the private physician or to the V. D. Clinic. He does not give any treatment himself but only performs the duties of the health officer in as far as possible to prevent the spread of venereal diseases.

I again thank you for the liberal discussion of my paper.

THE RESPONSIBILITY OF THE MEDICAL PROFESSION IN HANDLING VENEREAL DISEASE PROBLEM.*

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The problem of venereal disease control and the responsibility of the physician is a many-sided proposition. This paper does not deal with the diagnosis, pathology or treatment, but is an effort on part of the writer to present the magnitude of the problem of venereal disease control from both the medical and economic standpoint.

Venereal disease constitutes one of the major communicable disease problems of the world, outranking in importance any other cause of morbidity and mortality. Very considerable inroads have been made on tuberculosis, and this may be considered as a rapidly waning disease. The fight made against tuberculosis, and the successful results that are everywhere apparent, are due to three great factors: education, prophylaxis and intelligent treatment. This is in a measure true in cancer control. Likewise, typhoid fever, smallpox and diphtheria have lost their terrors. Some progress has been made in the control of venereal disease, which is probably due to educational methods put in force during the World War.

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Infant morbidity and mortality rates are rapidly falling throughout the nation and this is due to public health methods, principally educational. Child hygiene has exercised a similar beneficial effect, and this is due to educational efforts by public health workers. In the adolescent and young adult period, the morbidity and mortality rates are also falling. This is largely due to the control of typhoid and other preventable diseases. On account of the reduction in the death rate in the life period prior to the age of thirty, life expectation at birth has been greatly increased. There has not, however, been a corresponding decrease in morbidity and mortality rates in the ages above thirty. As a matter of fact, it is not improbable that a smaller percentage in the young adult group reach old age. A large part of this is due to venereal disease. There are many added factors, such as the great strain of our high speed modern existence. It is not practicable to reduce this high speed, and while the universal introduction of machinery with its labor saving and efficiency producing methods is taking the strain off man's body, this gain is in a large part counterbalanced by the inroad of venereal disease.

The control of venereal disease is an extremely complicated and difficult matter since, at base, it means an attempt to control the vital primary urge of the human species. Venereal disease, in the main, is the result of illicit sexual indulgence. The added factors today, making for the increase in sexual indulgence, are the increased social liberty between the sexes, the automobile, clandestine alcoholism and the prevalent disregard for law. These factors affect all classes from the most ignorant to the most highly intelligent.

I shall not discuss the moral aspect of this question. Suffice it to say that prostitution, as a moral issue, has existed since time was young and will exist to the end of time. The problem as I see it resolves itself into one of prophylaxis. Prophylaxis

may be educational, namely, indoctrination of the principal of self-control and of obedience to the restrictions imposed by civilized society; secondly, the use of chemical and mechanical prophylaxis. Since it is extremely difficult to inculcate the principles of self-control, this should be attempted by thorough hygienic teaching from the beginning of the child's intelligence into the adult period of life. This hygienic instruction should proceed from the general, in early childhood, to the particular; the latter being attempted during the period of adolescence, continuing and becoming more specific during the period of young manhood and womanhood.

Mechanical prophylaxis is a matter of education. It is not necessary to dilate upon the method or methods of mechanical prophylaxis. Chemical prophylaxis is a matter of education plus opportunity. Every community for its own safety must provide means for efficient chemical prophylaxis. Treatment must be considered as a prophylactic measure in that it prevents acute and chronic-carriers. Every health unit should provide means for the treatment of those infected and here, also, the privacy of the patient should be safeguarded. The sooner the public realizes the enormous toll of life, health, happiness and property that venereal disease is taking, the quicker will it institute measures for their prevention. When we stop to consider that 20 per cent of the inmates of state insane hospitals are there because of syphilis, we can appreciate somewhat the enormous economic loss. I do not know what the annual expense of the state hospital for the insane amounts to but one-fifth of this total expense is due to syphilis. This does not take into account the loss of time and reduced efficiency resulting from tertiary syphilitics who are not inmates of our asylums but nevertheless are reduced in efficiency or are charges upon their families. These include all cases of tabes dorsalis. It is impossible to compute the economic loss caused by syphilis, for the reason that we have no means of accurately determining the prevalence of the disease. An effort is made by our State Board of Health to compile such statistics but we all know how unreliable these are. Again, we, as physicians, know that syphilis is responsible for a large percentage of our abortions and still-births, and the consequent lowering of our birth rate. A survey recently made by the Mississippi State Health Department in co-operation with the United States Public Health Service gives the following startling figures:

This survey was conducted with the co-operation of Dr. Noblin, Health Director of Hinds County, Dr. Paul S. Carley, of the International Health Board, County Health Officer of Humphries County, and Acting Assistant Surgeon O. C. Wenger, as a representative of the U. S. Public Health States.

Up to date, 4,500 Wassermanns have been taken in Hinds and Humphries County. Approximately 3,500 of these Wassermanns were taken in and around Jackson, Mississippi. The other thousand were taken in Humphries County.

Of the 4,500 bloods, 2,276 were from female, and 2,224 were from male. The percentage of positives in the different age groups follows:

Age Groups	Male	Female	Average for Age Group No.	Wass.
5-9	6.2 per cent	5.6 per cent	5.9 per cent	571
10-14	9.0 " "	9.0 " "	9.0 " "	1,090
15-19	12.1 " "	9.5 " "	10.8 " "	836
20-29	24.3 " "	21.4 " "	22.8 " "	773
30-39	22.9 " "	19.0 " "	20.9 " "	490
40-49	24.1 " "	12.0 " "	18.0 " "	427
50-	13.0 " "	12.3 " "	12.7 " "	413
				4,500

Average for entire 13.31 per cent positive.

One must keep in mind that these figures are based on positive Wassermanns on an unselected group of negroes. (Note: No diagnosis of syphilis was made on clinical evidence. Such cases were not considered.)

Many of these patients in the 19-50 year group who gave a negative Wassermann may have had syphilis but because of more or less treatment or the age of their infection, their Wassermanns were negative.

Therefore, these figures do not represent the actual and true incidence of syphilis among this group The real incidence of syphilis can only be surmised. It is probable that for every positive Wassermann found in the age groups from 19-49, there is another case of syphilis that gives a negative Wassermann.

From an economic standpoint, gonorrhea stands close to tuberculosis and syphilis as a great social plague, probably the greatest. Gonorrhea affects not alone him who has the disease, but those who are dependent upon him for support. The annual loss of wages for work days lost through gonorrhea and its complications amounts to millions of dollars. Add to this the diminished earning power of the innumerable neurasthenics, chronic invalids and cripples whose condition can be traced to this disease and we have a total economic loss that is almost beyond computation. More important than this great financial loss is the relation which gonorrhea bears to marriage. To what an appalling degree women are made innocent victims through the men they marry, cannot be estimated. Years ago, the opinion was that 80 per cent of the women suffered from the effects of acute or latent gonorrhea. While the estimate might have been too high, it is undoubtedly true today that more than 60 per cent of all gynecologic surgical operations are the direct result of gonococcal infection and that gonorrhea has unsexed more women than all other diseases combined. No less startling is the role of gonorrhea in the causation of sterility and depopulation. In the male, sterility is produced most commonly as the result of epididymitis; latent gonorrhea of the prostate and seminal vesicles may accomplish the same result through the chronic infection and deterioration of the seminal fluid. In the female, childlessness most frequently depends upon the presence of metritis, cervicitis and salpingitis, all of which develop after gonococcal infection. Of all the cases of childless marriage, the husband is the sterile member in 40 to 50 per cent of cases. In the production of blindness, gonococcal infection stands high. Ophthalmia in the adult is not rare. It is produced by carrying the infectious discharge to the eye, either by the hand or through instruments, linens, etc. In infancy, the infection usually is derived at the time of passage through the infected vagina of the mother, or shortly after birth, through contamination by dressings, towels, or the infected hands of doctors or nurses. According to the National Committee for the Prevention of Blindness, 19.5 per cent of the total number of pupils (4,151) in the 48 schools for the blind in 1922-23, were sightless through ophthalmia neonatorum. Bearing these facts in mind, we feel justified in designating gonorrhea as one of the most formidable and widespread of all the dread evils to which mankind is subject.

Every effort should be made to educate the public on this subject and to tear aside the veil of mystery which yet envelops venereal diseases in many places. The fight against venereal diseases, the fight against cancer and the fight against tuberculosis are the three problems which can be solved only through the cooperation of the physician, the public and the state. The physician must realize that the responsibility of initiating a program of education lies with him. The public must be educated as to the ways and means for combating venereal disease and must be made to realize the enormous burden placed upon it as tax payers in maintaining state hospitals for the insane, the blind, and institutions for the care of crip-

ples and the feeble-minded. Employers must be made to realize that acute and chronic venereal disease among their employers result in lost time and lack of efficiency with a consequent decline in return from their labors. When these facts are thoroughly understood by the public, it will demand that the state take the steps necessary for the control of venereal disease. By such steps I do not mean the simple passage of laws against prostitution as this has been repeatedly done in the past. What I do mean is that a definite program of education be started in our schools, in our civic clubs, by our social workers, by employers of labor and in every possible manner of disseminating the facts of the devastating effects of venereal disease; that clinics and prophylactic stations be maintained in all communities. Our law makers have too long thought that their duties merely require the passing of laws against prostitution and that when the houses of public prostitution have been closed, prostitution no longer existed and that in consequence thereof, venereal disease is no longer possible. The fact is that the inmates of the houses legally closed are plying their trade in hotels, restaurants, on our streets and in our parks. Since, in our present state of civilization, prostitution cannot be eliminated as a social factor, the only recourse we have is one of education and prophylaxis. The responsibility in this matter is, as has already been pointed out, threefold. The State Board of Health, the general public and the medical profession constitute the legs of the tripod which must support any program of venereal prevention and eradication. If any one of these is missing, the entire combat against venereal disease must fail. If all three resolutely and cooperatively bear their respective burden of responsibility, success will come.

Upon the State Board of Health devolves leadership of the general public and the medical profession. Its duty is to awaken in the public mind a realization of the gravity of the problem and the necessity for fearlessly attacking it. It must afford expert advice and financial assistance in the establishment of prophylactic, diagnostic and treatment centers. It must popularize these with the general public; it must divest attendance at these clinics of any moral or social shame; it must make of them educational foci for infected individuals to the end that they cease spreading their infection. In cooperation with the State Department of Education, steps must be taken for the training of the youth of our State in continence and the avoidance of all infections, particularly those which are spread by sexual contact. This portion of the fight must be carried to the fathers and mothers of every community because, after all, the great lessons of life are best taught in the home. It must help the medical profession, already burdened with many civic responsibilities. Regretfully, it must be admitted that many physicians fail to realize the terrible inroads which the venereal infections are making into our economic, social and moral welfare and their duties in the attempt to stay what amounts to a veritable pestilence.

The general public must be brought to the realization that venereal disease prevention pays dividends in health, in money and in happiness and, having learned this great lesson, it must aid the State Board of Health, the State Educational Department and the profession of medicine in the work. Civic organizations of every character must take a hand; the better the community is organized against venereal disease, the sooner will it be conquered.

In this warfare, the medical profession furnishes the shock troops. They are the first to meet the enemy; they first engage him; they finally defeat him. The doctor has fought venereal disease since the beginning of time; this has been a lone fight; it is time that he be helped. This can best be done by the establishment of clinics which shall care for that time-consuming, expense-creating, non-paying class of pati-

ents. This relief will give the physician more time for the hygienic indoctrination of his clientele along the lines of venereal disease prevention.

Let us not be too optimistic as to immediate results; faith will move mountains if given time in which to operate; when we fight an enemy as deeply and widely intrenched as the spirochete and the gonococcus, it cannot be evicted in a year; ignorance, superstition and sloth die hard; they must be overcome. Results will come slowly at first but gains will pile up in the geometric ratio. In the words of Jefferson Davis, "If we but will it, we will be free."

DISCUSSION.

Dr. W. C. Rucker (New Orleans): This paper has many things which merit sincere congratulation. Among the outstanding things in this regard is the attitude of mind which Dr. Van Alstine has taken.

About twenty years ago a rather sharp line was drawn between public health and clinical medicine. The public health department felt they were quite sufficient unto themselves, and for a time being, they were because they were dealing with diseases which had been dissolved into their respective groups. For instance, a clinician told us the difference between typhoid and typhus. A great many diseases had been accurately marked out. The control of diseases, which was the outstanding thing at that time, was in a large way an engineering problem, and we could go off by ourselves and handle these problems.

The day has come when men who are thinking in public health work realize that we must get back to the bedside as a starting point.

Dr. Van Alstine has harmonized in his own mind the attitude of the clinician and the public health worker. A most important factor in this work which we have in the control of the venereal disease, the most outstanding public health problem there is in the world today, is the control of the venereal infection. I think of you who are practitioners of medicine recognize the fact that you are seeing cases every day, which, while not at that moment venereal diseases, were at time venereal diseases. You are seeing your clientele reduced in health, in efficiency, and in welfare and happiness by reason of the sequela of venereal infections.

It is a happy thing that Dr. Van Alstine has united for us these two and brought them together. When we come to attack this problem, we have essentially a question of education first of all.

I believe where we have to start in education is in the education of ourselves. At the Marine Hospital, of which I am in command, we have the officers' training school. We receive there young men who are just out of college. They come to use from all over the United States. These men are hand-picked, and it is surprising to me to find how few of them have any scintilla of a public health attitude. They have been well trained in clinical medicine and all its branches, but when it comes to thinking in terms of public health, they have not arrived at a place where they can do it.

Next we will have to proceed to the education of the public. I think there has been a terrific amount of misdirected effort in our education of the general public. We go on the principle that if we tell them that thus and thus is so they have learned a lesson, that they will go out and abide by it. I haven't a doubt that every person in this room was told carefully how to do square root, but I don't believe there is a dozen people who could do a problem in square root, and I do not believe there are three who can tell me the algebraic basis of the thing.

If you intelligent people have so well forgotten the things that were drilled into you when you were in school, what can we expect of the general public when we stand up and deliver a very high sounding oration to them about the protection of their health and the avoidance of illicit sexual intercourse and the avoidance thereby of infection?

The allergic bases then are nutrition, possession and procreation. Of course, we can handle nutrition by economic measures, the full dinner pail and everything that goes with it. We can handle it by full hygiene. We can handle the things that go into a man's body through the public health work which is done by the paid employees of the community.

Possession comes to us through economics or comes to us through industrial hygiene. That is where we have our safeguards thrown around.

Procreation brings to us social hygiene. We must admit that divested of any moral issue illicit sexual intercourse will go on, that there will be a certain number of people in the community who will not resist the procreative urge, and we must admit, I think, that this is where

our grave danger lies in the infections of syphilis, gonorrhea, coccidioidal and granulomatous infections.

At base, this is a problem in economics. It means that if the people are in good economic condition, they can afford to surround themselves with prophylactic measures and they will have time to secure education beginning at the first showing of intelligence until they have gotten well into the adult group. It means conversely that the control of venereal infections will increase the economic condition of the community, and this applies to everybody in the community. Anything which improves the condition of the community in an economic sense improves the condition of the practicing physician. The practicing physician who co-operates in the control of venereal diseases is not only helping his whole community, but he is helping himself in a greater measure than he could in any other way.

If the physician is going to get along, be prosperous, be happy and advance himself, he must have some leisure for study. He must be able to afford a certain amount of recreation. He must be able to get the ideas of other men and advance himself. If he is relieved of the burden of treating an enormous number of charity cases of venereal disease (and the public will be educated in this matter), he will get paid for what he does and thereby he will have leisure to do some of these things.

Dr. E. H. Linfield (Gulfport): The essayist and Dr. Rucker have covered the subject very fully. This little idea was handed to me by a patient in my office the other day, a young man who had attended some of these summer camps in North Carolina for two or three years where the director of the camp and Y. M. C. A. men in conjunction had given lectures on the prevention of venereal infection. He had come home and I was treating him in my office for venereal infection. He looked up in my cabinet and saw a lot of these steel instruments which I have. He asked what they were. I described to him what they were. He said, "If those fellows in camp would wave some of those iron rods around that I have seen here instead of shooting all that wind to us, they wouldn't have had to open their mouths."

I think we have to look upon a patient who is infected with a venereal infection as a sick individual just as though he had pneumonia, typhoid, or some of the other infections or contagious diseases with which we come in contact frequently.

I don't think we should try to tell this man he has been a law breaker. I think we should encourage him to do better, go out and tell the other fellows what has happened, and teach them co-operation so that when they are infected they can be cured by competent co-operation with their doctor.

I read a paper two years ago in Jackson along this same line. I brought out in that paper that I thought education was primary in the prevention of venereal infection, that education should start with the child in the home, and that the parent should take the child off to one side and talk to him or to her and teach him or her the fundamentals of the procreative function when they are attaining the proper age. I also thought that in the schools the two sexes should be separated, and that competent individuals, men and women, should deliver lectures to these children in school on these particular functions and the grave dangers of overstepping the limits and getting out of the traces; that is, from the standpoint of the danger of infection.

Dr. Frank L. Van Alstine (closing): I appreciate the discussion. I am sorry the time is so short, because I wanted to finish reading my paper, not because I am particularly proud of it, but I wanted to try to drive home what I thought was necessary.

I think education along these lines should begin in childhood along general hygienic measures, making it more specific as they reach the adolescent age, and on into young womanhood. It should also be taken up in the public schools. It should be taken up by the civic clubs; it should be taken up by every agency that possibly can put the question across. There is no other way of combating it.

We have had doctors for many, many years. Instead of there being less venereal disease today and fewer ravages, there are more. My office would be swarmed twenty-four hours a day if I could give my time to even the treatment of gonorrhea alone. Applicant after applicant comes in, waitresses from restaurants, workers in hotels.

Passing laws against prostitution means nothing at all. We have no open houses of prostitution in Jackson, but practically every hotel and every restaurant is an open house. They accept you on the street or while walking in the parks; so law means nothing.

A PRACTICAL CHILD HEALTH PROGRAM FOR A RURAL COUNTY.*

J. B. BLACK, M. D.,

MURFREESBORO, TENN.

In discussing this subject one comes to face the fact that the word "practical" in the title is an ambiguous term. What might be considered a practical program by one health officer might be thought impractical by another. Of course, the capacity for work varies with individuals. Some directors of public health organizations may find themselves so loaded down with the details of their work that they haven't the time to get around to all the duties that call for their attention, while others may find it difficult to find things to do to take up all their time. It is likely that a well thought out program will tend to make more phases of public health work practical for those of the former group and possibly do something to arouse those of the latter group from their peaceful lethargy.

Too, the question of the size of the personnel of an organization will be raised as a factor influencing the practicability of the program. Unquestionably, within certain limits, that will be a factor. However, with a well balanced organization, it is thought that the size of the personnel should influence more the volume of work than the type and character of it. What is meant by a well balanced organization is that which has as a minimum staff, a physician, a sanitary inspector, a nurse, and a clerk.

Therefore, at such a basic organization the rough outline of this child health program is more particularly directed. Nothing new is offered. Certain procedures that have proved practical elsewhere for getting results are suggested and emphasized.

*Read before the Section on Hygiene and Public Health, at the Sixty-second Annual Session of the Mississippi State Medical Association, Gulfport, May 15, 1929.

A child health program naturally is divided roughly into four periods of the child's life:

(1) School, (2) pre-school, (3) infant, and (4) pre-natal.

Since school children are collected conveniently into large groups they are brought as a rule into closer contact with the health department than at any other period of their lives. The health department has certain aims in view in working with this group. First, education in health matters is promoted through the teachers and pupils. Second, physical examinations are given to the pupils and teachers with the idea of locating defects and securing their correction. Third, active immunization against such diseases as smallpox, diphtheria and typhoid fever is promoted.

To get much education in health matters over to a child, to get many of his physical defects corrected or to get him immunized against the diseases mentioned he must be aroused by means of some concrete stimulus. The best means that have come to the attention of the writer for stimulating children are the promotion of what are known as blue ribbon or health contests among the schools. The blue ribbon idea probably originated with the Child Health Demonstration conducted in Mansfield, Ohio, a number of years ago. It has since been used and improved upon by the child health demonstrations promoted by the Commonwealth Fund of New York. The blue ribbon seems to appeal greatly to the rural child. It is given him as a health badge after the fulfillment on his part of certain requirements. The schools compete for prizes such as silver cups, the one securing the highest percentage of the student body with blue ribbons winning.

The requirements for a blue ribbon, or health badge, are as follows:

1. Evidence of satisfactory school work.
2. Reasonable co-operation in the practice of health habits as listed on a daily health record for the schools.

3. Satisfaction in behavior and attitude in the school environment.

4. As to health status (a) freedom from remediable defects and from chronic diseases which have not received the maximum of treatment; (b) immunity against smallpox, typhoid fever and diphtheria.

The contests should open on a certain date and close on a certain official date. A parade of all blue ribbon children at the county seat on a given date after the close of the contests gives an extra impetus to children qualifying.

In the writer's experience such a health contest, as outlined above, creates a tremendous interest among school children in health matters. If the work is intelligently directed with the co-operation and interest of the teachers, the interest grows from year to year.

During the vacation period, after the close of the school, is probably the best time for putting special emphasis on work among the pre-school and infant groups and clinics may be organized in the different communities of the county at which children are examined, mothers are instructed in feeding well babies, and vaccinations are given. Such clinics may be held at the office of the health department on certain days throughout the year. They may also be held on occasions in connection with school examinations.

With the pre-school group interest may be created by awarding blue ribbons, or health badges, to those children who have fulfilled certain requirements. Usually the requirements are a modification of those for school children. They may include (1) evidence of birth registration; (2) observation of certain health habits, such as proper feeding, required number of hours of sleep, rest periods, etc.; (3) freedom from remedial defects and from chronic diseases which have not received the maximum treatment; (4) immunity against certain infectious diseases.

Special emphasis should be placed on immunizing all children over six months of age against diphtheria.

Scales should be placed conveniently for mothers to weigh their babies and record the growth and development.

As far as possible, all pre-natal cases should be located and urged to seek the care and observation of physicians. Of course, the physician should see that urinalysis and blood pressure determinations are made. Wassermann tests on mothers should not be neglected.

To carry on a child health program the co-operation of physicians, dentists, and teachers must be had. If the enthusiastic interest of teachers is secured, usually the children will look after the interest of the parents. Especially is this true in school work.

DISCUSSION.

Dr. F. J. Underwood (Jackson): I am inclined to become rather reminiscent this morning and recall that only a few years ago, really a comparatively short time ago, the public health program in this state consisted of a hookworm campaign solely There has been a most remarkable and eventful evolution from a simple campaign for the eradication of hookworm to this splendid outline that Dr. Smith has given you this morning.

A few years ago in discussing programs of this kind we had a similar attitude to that of the policeman on the street of Jackson a few days ago when he stopped an automobile and said to the lady driver, "Don't you know anything about the traffic rules of this city?"

She said, "Very little, sir, but if I can help you I will be glad to do so."

The child health program and the public health work in Mississippi consisted principally of locating the prettiest baby. I made enemies then that I shall always have because of selections of that kind. The health standard we set now really mean something. For a child to obtain a health button or a health ribbon means that that child must measure up to a certain required standard. In one or two quarters there has been some disposition to let children pass on promises that they will have the corrections made shortly, or in order to please the mothers there has been a little laxity along this line in Mississippi. There should be

none. We should hew to the line and make the health button or health ribbon mean something. It is possible, and we are doing it right along, to lessen the burden of school work and the more or less confusion brought about by carrying out the school program.

Much of this work is being done, and more of it could be done, by carrying out an adequate pre-school program. We can get smallpox vaccinations, diphtheria immunizations, postural defects, orthopedic defects, and a number of things out of the way before the child enters school. Then the child will not be hindered and hampered by these defects and lose the time required to correct them during the school life.

It was very surprising to me to note the interest of the teachers in the pre-school program. Not only the physicians and the health workers, but the teachers themselves are realizing as never before the importance of real, honest-to-goodness pre-school work, a pre-school program that means something.

With well organized pre-natal infant, pre-school and school health programs, we have nothing to worry about so far as the future of the race is concerned.

I was in Illinois a few days ago and had the pleasure of addressing the Peoria Medical Society. There were about 130 men present. I told them about our work in Mississippi. They were surprised and astonished to know that a Southern state is doing the work we are doing here. I outlined the program and told them the progress that had been made during the past ten or fifteen years. That state has one full-time county health department at the present time, and on account of the local political situation, it is about to be discontinued.

I wish to congratulate Dr. Black on the presentation of this splendid outline. It is classical. We regretted very much to lose the services of Dr. Black. Our loss is Tennessee's gain, but we found that we could not compete with the commonwealth people in combination with the Tennessee State Board of Health on the matter of salaries. The doctor went up to Tennessee to Rutherford County as assistant director of child health demonstration at a salary of $1500 more than a health officer receives in Mississippi. They have done wonderful things there. Mississippi feels proud of what it has done for Tennessee in the way of giving them their leaders—Dr. Black, Dr. Harrison, Director of the Health Department of Shelby County, and the city health commissioner of Memphis. We have done a great deal for public health in Tennessee for which we are very proud.

Dr. H. C. Ricks (State Epidemiologist, Jackson): I am glad that Dr. Black got around to the subject that he started to discuss. He said he was going to discuss a child health program, and I knew after he read his paper and I heard his discussion that he was talking about what these full-time health departments are doing in the State of Mississippi.

Comparing the health ribbon with the health button, I believe it would be a wise thing for Mississippi to change the health button to a health ribbon, when I think of what happened in Lauderdale County during the presidential campaign. Some families there had two girls looking after their children. They came in with these buttons on their coats or head gear, and the people said, "I don't believe we want you to work here."

They asked, "What is the trouble?"

"I will be doggone if I am going to employ you when the health department has gotten into politics supporting Hoover."

I believe this health ribbon would be a good thing for Mississippi to adopt.

As to the personnel of the department, I am sorry Dr. Black did not bring out especially in his child health program that a deparmental hygienist, under the direction of the health officer, would be a very valuable asset. In fact, from what I have seen of the work of the departmental hygienist in this state, a well trained individual, I think the departmental hygienist can be worth as much in the control of the remedial defects that occur in school children as any other member of the organization.

The control of communicable diseases in children (and that is the object, I believe, of health work) is one of the subjects in which I am primarily interested, if I am interested in one more than another.

We like to think of the application of a program as it applies to our own locality. I think the application in Mississippi will apply to other Southern states from the records I have been able to get from some of them, and certainly it will apply in the entire North American continent. That is, if we are to control (and I want to stress this point) diphtheria in this North American continent, it must be done in the age group under five.

The State Health Department Bureau has vital statistics that I have been able to get hold of, and they show that in 1928, of 158 deaths from diphtheria in Mississippi, 95 of those occurred in children under five years of age. We must stress the pre-school age more than the school age if we are going to reduce our diphtheria death rate or our disease rate in this state. The same thing applied in 1927 and 1926, which were the only

years that we had definite records as to the incidence of disease by age groups. This, notwithstanding the fact that we have many more children living in the age group five to nine than we have in the age group under five.

Smallpox and typhoid, of course, occur more in the age group of five to nine and ten to nineteen. Those are the highest age groups for typhoid and smallpox, so the vaccination against typhoid and smallpox should be stressed in the school age group and not so much in the pre-school group.

I want to stress this point about doing a Wassermann on the expectant mother. Dr. J. Richard Williams says that no man has completed his obligation to his patient until he has had a Wassermann test done.

The next thing I should like to ask Dr. Black is, in putting on a purely child health program, not as a county health department as we have in Mississippi, what would the population of the county have to be to make it reasonably practical to put on this program in?

Dr. F. M. Smith (Vicksburg): I enjoyed Dr. Black's paper very much. As to where he lived and passing the word to the neighbor and how long it took the neighbor to get it as he gave it to you in his opening remarks, someway, somehow, the message of pure public health and the organization of an all-time health department in the rural county has gotten to Black, and where it came from we shall not endeavor to find just so long as it reached him.

In making this program he has set out certain requirements that we feel are altogether proper. We do raise a question as to the obtaining of this blue ribbon on these two points: the school record or grades of a child in school, and the child's behavior. Those are admirable things and in a way may be brought under the head of mental direction. I am wondering, however, if they should be in the uniform requirements for a health button or a blue ribbon.

I like the idea, regardless of whether we have a health button or a blue ribbon. It is not so much the emblem but what it stands for. A rose by any other name might be just as sweet. Personally, I like very much the health button with the name of the state written on it endorsing the child's health.

The thing that appeals to me is that there should be a uniform requirement, that we in one county should not be giving health buttons with a minimum requirement, while in another county children are receiving these buttons when every requirement is made. I believe the requirements should be uniform and high, and as near physical perfection as we can get them—having a successfull scar for vaccination, having antitoxin with a negative Schick test, etc. This should be worked out and submitted to the various local health departments. Then when we get a blue ribbon in Warren County, it will signify the same thing as it does in Lauderdale.

Dr. G. W. Googe (Rienzi): With reference to the uniformity of the program and the requirements for obtaining a health button, I wish to say that I guess we have about the lowest standards for obtaining a health button in Lauderdale County as any county in the state. We realized we could not do everything the first year. It can't be done. We had to work our program in cooperation with the superintendent of city schools. He approved or disapproved. We approved or disapproved. Finally, we worked out a program that was acceptable to all.

We can't have uniform standards on the health button or the blue ribbon problem. The same shoe won't fit every foot. This is our first year for a health program in Lauderdale County. Next year we will move up a notch and do a little more effective child health work.

There is one phase of the child health program that has not been mentioned which seems to be as essential as any that have been mentioned and that is with regard to sanitation. What profit is it if you remove the child's tonsils or immunize him against diphtheria and then have him die from typhoid fever or dysentery within a month's time? It seems to me that if we are to have a well-rounded child's health program we must include sanitation, not only sanitation of the home, but sanitation of the food supplies.

I have enjoyed the discussion. I have heard it time and time again, but still I always enjoy Dr. Black's discussions. I think he exercises common sense and keep his feet on the ground. If we are to continue to make progress, as we have, we must keep out feet on the ground and do the things that we can do. We must not set our aim too high. Of course we want to shoot at a star, but we should put on a common sense program and work and obtain results.

Dr. A. L. Emerson (Hernando): We do part-time county health work in our county. There is no one here who is more pleased to see Dr. Black than I. Shortly after Dr. Black sent out his message, as he used to send it out, he came over to our town to teach school. The board saw him walk up there that morning, nothing but a little boy. One of the men on the board said, "Dr. Emerson, is this the teacher you recommended to teach our school?"

I said, "Yes."

He said, "We didn't want a boy. We want a man to teach this school."

I said, "Well, give him a chance." Do you know that it was all I could do to keep those trustees from firing him right at the start? I said, "Now, that will not do. Give him a chance and if he doesn't make good, then fire him." Before long we had one of the best schools we ever had in that town.

I have one of the hardest counties in the state to control. I live in the extreme northwestern part of this state, right on the edge of Memphis, where we have all sorts of diseases drifting out from the city, as well as blind tigers, and everything else, with which we want to come in contact. It is a problem to keep these diseases under control.

As a part-time county health officer I went to work up there to examine every school child in that county. While we have a disadvantage in being close to Memphis, we still have an advantage. There are several specialists in the city of Memphis. When I got ready to make my school examinations I said to the specialist (eye, ear, nose and throat man, heart and lung specialist, and teeth), "I want you to come down and examine the children in a certain school on a certain day. If you come down early, we can get through by one o'clock and that will give you sufficient time to get back to your office in the afternoon." They are glad to do it.

I line up an eye man, a nose and throat man, a chest man, and a skin and scalp man, and start those children through the line. By the time they get through the mill they are pretty well examined.

Each specialist has a secretary who puts down his findings, and when that child has arrived at the end of the line, we have two secretaries who fill out these blanks. The child takes the blank home to his parents, and every parent in my county for the last four years has a correct diagnosis of the defects of his child.

It is some job to carry that point out. I have been begging my board of supervisors for a nurse to carry out the instructions that go to these people who do not know what it means to have a health child.

Our county demonstrator receives $600 a year, and you all know what the part-time county health officers gets without asking.

Dr. H. R. Hays (Laurel): I have enjoyed Dr. Black's paper very much. We are undertaking a similar program in Jones County. I can appreciate what the contest means.

When we first made our examination of forty-seven rural students in eight schools and eight schools in the city, there were very few children who could get a health button. Very little effort was made to bring about corrections. Then we started a contest.

I got the South Mississippi Fair Association to agree to give a pass to every child who would receive a health button. I published the announcement. Then we got merchants of the town to agree to give to the child who was selected at the South Mississippi Fair as the healthiest child in the county a prize. There was a prize for the boy and one for the girl selected. We published the list of prizes. Then we began to urge the correction of defects, because a child could not enter the contest until he received a health button. A child had to be physically perfect or have every defect eliminated and be immunized against the three diseases—smallpox, typhoid fever (if under ten years old), three shots of toxin-antitoxin—before he could receive a health button.

In one school in Ellisville, not a single health button was awarded when we started this program. Since then fifty-seven have qualified so far for health buttons. Competition is keen, reaching out into the smaller districts, until now they are coming in to get their defects corrected.

I was struck with one little child, a child of a blind father whose mother was dead, and who needed to have his tonsils out. This child was sent by the teacher with his little basket in his hand containing his night clothes to walk three miles to the hospital to have his tonsils removed. Another teacher picked up the child and took him to the hospital and later a piece was written up in the newspaper concerning him.

One of the things that have been discussed is the low standard of a health button. I think a person is either a fit subject for a health buttton or he is not. I think we should never temporize. I think we should never give a health button unless it means something, because if we do, certainly we haven't anything to work forward to. If we let the educational people or anyone else dictate the standard for these buttons to us as health men, it will always be something that is not decided. If we demand that they reach the standard, they will work and have all their defects eliminated.

I would rather have five children who are perfectly healthy in the county and have the rest of them working to that goal rather than to have 150 or 200 children with health buttons.

Finally, we are going to have a big parade. No child who hasn't a health button can get into the parade.

Dr. Searle Harris (Birmingham): First, I want to say that I had the privilege of spending two

days last year in Murfreesboro. The thing with which I was most impressed while there was the very cordial co-operation of the medical profession with the men of the commonwealth and the men who were engaged in this rural child welfare work. To my mind, that is the most important part of the public health work or the most important thing in the development of the race, you might say.

There are some thing that Dr. Black did not mention. Of course, he could not discuss every phase of this child welfare program. He mentioned the matter of diet and he also mentioned the matter of weight. Of course, there are a great many important phases to this work, but the most important phase of the work for protecting the child, and later the adult against disease, is in the matter of the nutrition of that child.

In the first place, there is the child of preschool age. McHolland insists that ninety-five per cent of all children have rickets and that a great many of the crippled children whom you see have been the result of improper feeding during the first year of life.

Of course, it means a great deal of work. The underfed child is potentially a subject for developing tuberculosis. The overfed child is going to be the diabetic and the nephritic of the future.

These children should be taught early in life with regard to the important matter of weight. The overweight, backward child in school very often is a case of hypothyroidism. If this work is begun early, we can catch the cretins at a time when the addition of some thyroid to their daily diet will bring them out of that condition and they will do better work in the schools. Furthermore, as they grow older, we can catch the hyperthyroid cases, those who are underweight.

Another question is that of the standing of the children in school. In the rural work of Jefferson County, this matter of nutrition is stressed particularly. They have found that undernourished children when fed properly and given more milk, eggs, and fruit, improve in their school work very rapidly, and also improve in their health work.

We found in making food examinations in Germany after the war that the children suffered more from lack of nutrition than anything else, and that every disease—diphtheria, scarlet fever, tuberculosis, and every other disease—could increase among the children. The child death rate increased enormously due to the lack of nutrition.

I believe that should be added to this child welfare work together with McCullom's dictum: "A quart of milk for every child, one raw fruit, and one or two green vegetables every day, in addition to the other food." '

Thank you.

Dr. W. D. Beacham (Hattiesburg): Forrest County presented to the world in 1926 the first school with every physical defect of the child corrected. Last year we presented Hattiesburg, the only city in the United States with every white child in the grammar schools having every tooth filled. Two weeks ago we presented the first rural district in America, District No. 2, where every child from the primary grade through the twelfth grade had every tooth filled.

I wish I had time to tell you something of our nutritional work in Forrest County. On behalf of Dr. W. W. Crawford, President of the State Board of Health, and myself, if you would like to know something of our work, we would be glad to have you visit us.

Dr. J. B. Black (closing): I feel very humble, I assure you. I wish to disillusion the minds of some of you regarding the fact that this program I have outlined to you is just set off by itself and is not connected with full-time health organization. These are just some suggestions that go along with our health program which is carried on by a full-time health organization. The larger that organization is, the better you can carry it on and the more you can accomplish by it.

As far as sanitation and the requirements for the blue ribbon are concerned, those will vary, of course, with the condition which you have to meet. We have started a contest among the Negro children. This contest, of course, is a modification of the one we carry on with the white children. Since the getting of the defects corrected among the negroes is something that is hard to accomplish, we have added some particular requirements to take the place of that. If they have a sanitary method of disposal of excreta in their homes and have their teeth corrected and have had inocculations against typhoid fever, diphtheria and small pox, we give them a button for fulfilling those requirements. We do not say that he is a perfect child. We are not exhibiting him as Exhibit "A," the healthiest child of America. If they fulfill certain requirements, they are entitled to certain awards.

No badge or blue ribbon should be given to a child until he has fulfilled those requirements which you have set forth. You do not want to be quick about it at all. You want to put your foot down hard when someone tries to slip over a child who hasn't fulfilled the requirements of the contest.

Also the question of the teacher and the status of the child in his work in school has come up. If you do not get the teacher's cooperation, you will get nothing done in your contest. If you don't take the matter up with your council and have them offer some suggestions, you are making a great mistake, because if you think you know all about running one of these health contests yourself, you will become disillusioned very quickly after you start. Some of these teachers have some very practical ideas about the matter and they will have some very practical suggestions to offer to you in carrying out the program.

We let the teacher pass on the question of the child's standing. It is not often that a child is turned down because he has not made his grades. Usually the teacher overlooks that matter, but if he is a dullard in school and takes no interest at all, that is the best sign that there is something wrong with the child. Therefore, we make a thorough investigation of those youngsters to see just what the trouble may be. By paying attention to that phase of the work, many children are brought back to us who would have been overlooked in the first examination. Some defect in that child may have been overlooked which may be the cause of his backward tendency.

Of course, as I said in the beginning, the requirements of the contest should meet the conditions of the county. The larger the organization the better and the more things you can include in the requirements.

The badge is quite important. It must be attractive. It must appeal to the child. It must be something that he will wear with pride. It seems to carry with it a feeling of decoration, that he is being decorated for some confidence that he has carried out. This is just a suggestion. Use anything that will make that child get busy and work in your contest. This is just a happy suggestion that has been offered and is one that seems to get results.

THE RECENT EPIDEMIC OF INFLUENZA AND ITS COMPLICATIONS.*

W. L. STALLWORTH, M. D.,

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To report on the subject of influenza at the present time is essentially to write the history of the epidemic of 1918-1919. At present the reports and literature on the pandemic of the winter of 1928-29 are very meagre and it has been very difficult to gather data for an intelligent report.

Regardless of opportunities that have presented themselves additional knowledge acquired about this disease has been largely of a negative character.

The great nations of the earth have not been organized for war, nor have the victims of the disease been in segregated areas such as we saw in 1918.

An immense amount of work has been done by the medical departments of the Army and Navy and the Public Service and by individually competent observers. The factors of complicating pneumonias have been more definitely observed and experimental studies on contagiousness and modes of transmission have been carried out.

At present little that was unknown has been unfolded. Save for a few facts of epidemiology, the doubt cast upon the specificity of the Pfeiffer organism, the addition of serologic and immunologic observations, and knowledge of the nature of certain complications that which is written today must in a measure repeat the observations of those who have lived through and observed the previous epidemics of history.

Authentic and detailed accounts of epidemic date from 1510 and include descriptions by such famous physicians as Willis

*Read before the Section of Medicine, at the Sixty-second Annual Session of the Mississippi State Medical, Association, Gulfport, May 14, 1929.

and Syndenham, but no doubt certain plagues that swept the world centuries before were influenza. Epidemics are recorded in the sixteenth, seventeenth and eighteenth centuries. In times more recent pandemics have occurred in the years 1930-1831, 1836-1837, 1843, 1847 and 1848, 1889, 1892, 1918-1919, 1920, 1926 and the present epidemic. The two last severe pandemics 1889, 1892, 1918-1919 had their origin in Russia spreading rapidly eastward, the 1918 pandemic with the greater rapidity. The pandemic of this year supposedly had its origin in Russia, but contrary to past performances spread in an easterly direction. It appeared in California early in October, 1928, spreading rapidly across the continent, the number of reported cases reaching the peak December 22, 1928. Comparing the present epidemic with former epidemics that have occurred in recent years, it may be seen that at the peak week the mortality of the 1928-1929 epidemic was nearly twice as great as the corresponding week of the 1926 epidemic.

The excess mortality rate of the 1920 epidemic was about three times the present excess rate that of 1918 about ten times the present excess rate.

From these statistics we gather that the virulence of infection in this recent epidemic was not as severe nor the complications so numerous as in the past epidemics. However, we probably would have regarded the past epidemic more seriously had it not been for the overshadowing effect of the 1918 pandemic.

In Mississippi from the month of September, 1928, to February, 1929, inclusive, the number of reported cases totalled, 192,578, with 2,143 deaths. The largest number of cases reported was in December, 1928, with 108,860 cases reported. This report is possibly exaggerated, as many cases of common colds or ordinary la grippe were probably reported as influenza.

It is also well known that influenza exists to a greater or less extent at all times among all peoples in every country. Since the germ causing the disease has not been satisfactorily demonstrated it is necessary to depend on symptoms for a diagnosis.

CONFERENCE ON THE PRESENT INFLUENZA EPIDEMIC.

The conference called by the Surgeon General to discuss the influenza epidemic met in Washington, D. C., January 10. It was attended by State and local health officers, research workers, and others interested in the problems of influenza.

Although the meeting did not bring to light any new or unusual information regarding the disease, (it was not expected nor was that its purpose) it provided an opportunity for experience health workers to set forth concisely their views on how best to meet the problems with the means at hand.

Three committees made reports, namely, the committee on epidemiology, the committee on preventive measures, and the committee on research.

REPORT OF COMMITTEE ON EPIDEMIOLOGY.

The features which have distinguished influenza in its typical outbreaks, such as those of 1918 and 1899-90, are:

1. A great increase in the prevalence of illness of which the usual symptoms are: fever, of more or less sudden onset, of moderately high range, and of only a few days' duration; aching of the body and limbs; inflammation of the upper respiratory passages; and marked prostration. In its manner of spread this disease has the characteristic of a highly contagious infection, transmitted directly from person to person.

2. Coincident increase in the prevalence of pneumonia, developing apparently as a complication of a certain proportion of the influenza cases.

3. A rise in the general mortality rate, due largely to increase in deaths certified

as influenza or pneumonia. These deaths characteristically show an age distribution different from that of normal times, in that the proportion of young adults is increased.

4. In any given locality the epidemic develops and runs its course rapidly, so that its duration, even in a large city, is a matter of not more than five to ten weeks.

5. The tendency is to rapid and wide extension, different communities being attacked in such quick succession that the spread across a continent requires only a few weeks, and where the disease becomes pandemic it travels around the world within three to six months.

For the statistical and epidemiological study of the epidemic we recommend:

1. That the Public Health Service continue and extend its activity in the collection and compilation of morbidity and mortality statistics, to afford both a current and a permanent record of the epidemic.

2. That the Public Health Service undertake special surveys of morbidity in a sufficient number of localities to give a more exact picture of the prevalence and epidemiology of the disease.

3. That State and local health authorities, the military services, and institutions, in addition to collecting their usual records, undertake such statistical and field studies as circumstances will permit, and that they be especially on the alert to take advantage of any opportunities which may be presented for unusually instructive epidemiological observations.

4. We would also call attention to the need for extensive and careful clinical studies, particularly such as will give accurate descriptions of unselected cases, including the milder types of doubtful diagnosis.

In addition to the general subject, two specific questions have been referred to this committee.

First. Is it desirable that influenza be included in the list of notifiable diseases?

We believe that it should be so included, at least to the extent of simple numerical statements.

Second. Should an official clinical definition of influenza be adopted by this conference for the guidance of physicians in differentiating influenza from other respiratory disorders, to the end that morbidity reports should be more uniformly comparable?

We believe that this is not advisable.

WILLIAM H. WELCH,
Chairman.

REPORT OF COMMITTEE ON PREVENTIVE MEASURES.

When influenza is prevalent or is believed to be approaching a community during the course of an epidemic, it is advisable to take advantage of the public interest and concern by emphasizing anew those public precautions and practices of personal hygiene upon which the prevention of communicable affections of the upper respiratory tract depend.

Measures for precaution fall naturally under those of a communal or administrative character and those which apply to the individual.

I. Communal or public precautions.

II. Education in cleanly personal habits.

III. Advice to individuals for guarding against colds, upper respiratory infections, and influenza.

IV. What to do to prevent becoming seriously ill if you get the disease.

Though no form of organism than the Pfeiffer bacillus has been discovered, many bacteriologists believe that the disease is caused by a filtrable virus. One point of

general agreement is that the complicating broncho-pneumonia may be produced by a variety of organisms.

The immunity conferred by an attack is relative, some people having several attacks in a lifetime.

The incubation period is very brief—from a few hours to a few days.

The onset is usually very sudden and violent, there is sudden chilliness, fever, headache, pain in the back and legs and intense prostration. Later respiratory, gastro-intestinal, circulatory and nervous symptoms appear. After the initial chilliness or rigor, the fever may rise from 100° F. to 105° F., usually reaching the apex in the first 48 hours, and then gradually subsides. Severe frontal headache and pain in back and legs are frequently complained of.

Among the early symtoms is a catarrhal inflammation of the entire upper air passages, with a serous secretion which later may become mucopurulent.

In some cases there is nausea or vomiting, loss of appetite, these symptoms gradually subside. There are in some cases sharp abdominal pains and often diarrhea. Jaundice is a variable symptom.

The nervous symptoms vary from stupor or delirium to excitement and sleeplessness.

The course of the disease rarely runs over two weeks. Relapses are frequent, recurrences of fever are, however, frequently due to complications.

Complications during the past epidemic were not as numerous or as grave as in former epidemics. The complications, as before, were far more important than the disease itself; the most important of these being the pulmonary complications. I personally did not see a fatality from pneumonia, except in the aged or invalid. Those developing pneumonia usually had not remained in bed as directed and had relapsed. This is in marked contrast to the epidemic of 1918.

Numerous cases developed a troublesome laryngitis, with a very severe rasping cough.

There was in most cases an intense injection and congestion of the nasopharyngeal mucous membrane, causing the severe frontal headaches and predisposing to a sinusitis. In my opinion, one of the most important parts of treatment is to try to guard against such complications by proper attention to the nose and throat. The sinusitis usually appears after the influenza has subsided.

Otitis media was a fairly frequent complication and especially so in children. I saw one case of meningitis in an infant following a midde ear infection in which a pure culture of the influenza bacillus was made from the spinal fluid.

Eye complications outside of the conjuctivities were extremely rare. Circulatory complications were extremely rare even with the cases developing a pneumonia.

Influenza meningitis is a very rare complication, but occurs more frequently among children.

The urinary complications are the usual scanty urine, slight amount of albumen or a few casts. A severe nephritis is very rare.

Influenza during pregnancy, if very severe, may lead to abortion or miscarriage, and frequently assumes a serious character.

On the whole we might say of this past epidemic that the disease spread with the same rapidity, but was not as severe, nor the complications as numerous as in other pandemics of recent years. However, since so little is known of the etiology of this disease a systematic study must be carried on by all our health departments.

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DISCUSSION.

Chairman Dearman: This paper is open for general discussion, gentlemen. This is more or less of a universal subject. It ramifies into every sphere of medicine. We want a discussion of this phase of the subject, because it seems every year the epidemic or pandemic or sporadic type of influenza breaks out and it seems as though some line of treatment might be suggested by some physician that may be worth while. It is well to keep abreast of a condition that is so invalidating to our civilization. There have been people who have dropped dead after having influenza who had never had any previous murmur of the heart.

Dr. W. H. Priddy (Memphis, Tenn.): This question is, indeed, a very important one to me, and to my mind it is one of the greatest diseases that the doctors today have to combat. We are seeing the effects of this, more especially one who is doing work in mental and nerve diseases. We don't know when we are through with this disease. Right at the present time I am seeing some patients who had influenza in 1918 and are now developing the ill effects of influenza.

We have never before seen as many people affected mentally as were affected during this last epidemic that occurred in January and February. I believe this is true more so than in 1918. It might be due to the fact that I am in position to see more patients, but I rise to point out to you the seriousness and the importance of this disease rest upon the prevention and not on the treatment.

Dr. J. P. Murray (Carson): I don't presume to offer anything special to this organization, especially since the essayist has said that it is all summarized and we know very little.

I am appearing before you only to ask one question that made an impression upon me this winter and to see whether it has been the experience of others engaged last winter in the general practice. Is there any immunity of certain races? I have been a part-time health officer in my county for the past eight or ten months.

About the fourteenth or the fifteenth of December, this epidemic or pandemic was so widespread and so hurried in its effects that it put our entire school force in our white schools in all our little towns. Our county is very much blessed in nearly every bit of it being in consolidated school districts running from three to ten members in the school. Almost universally the entire personnel of these white schools, including teachers and pupils, were taken ill within a week or two. Not a single negro school in my county (and we have a good many) had to disband. In my practice among the negroes, one family of six or seven had the disease, and one other family consisting of two.

I should like to know whether that happened to anybody else, or whether it might have been a localized immunity in my county, or whether there is something in it as a whole.

Dr. Joe E. Green (Richton): I want to answer the doctor for Perry County. The niggers down there sure had influenza. Some of the doctors spoke of prevention. I am strong for that. I think the niggers' preventative was to tie a big ball of asafetida around their necks at night and in the morning when it got hot it just fogged and they never had influenza.

Dr. J. W. Jackson (Hilton): I beg to take issue with the doctor when he says that the number of cases reported was exaggerated and that a great many of them probably were colds. Around here, a great many of them were not reported because they were mild cases. I have observed that the severe attacks were attended by fewer complications because they had to go to bed and

had to call a doctor. They weren't able to get out of bed. Many of the mild cases kept on their feet and kept going, and then they would come in with complications of pyelitis and sinus infections, and upon inquiry as to the history of influenza the reply was: "I had a cold." Many of them had almost forgotten about it until they were talked to a little more concering the matter.

The recent epidemic certainly created a serious situation and it should be of considerable concern, because the end results are rather bad. As Dr. Green, I believe, has mentioned, you never know when you are through with it.

Dr. F. Michael Smith (Vicksburg): I am not here to discuss the pathology, etiology or treatment of influenza, or its history or either of its forms, pandemic or otherwise, of the great scourges that have come to our country; but a statement was made relative to the closing of schools.

As a public health officer and practitioner of preventive medicine, I want to give as my experience with the epidemic that we have had so far that the closing of schools has helped very little in the control of influenza. During the past season, although it was in mild form, quite a few of the schools of Mississippi were closed. In Vicksburg there was considerable clamoring to close our schools, but we succeeded in some way in going through, and as far as I could observe, I do not see that the epidemic was continued longer or cut shorter or the fatality of complications was greater.

I am here to state this fact for the general practitioners and the doctors of Mississippi to consider: We so far have no preventatives that we believe are worth while and the closing of the schools has gotten us far.

Dr. G. W. Clayton (Laurel): Gentlemen, I don't think we can ever say what we ought to do as a cut and dried proposition, such as closing or not closing schools. We felt in Laurel that we derived considerable results by closing the schools. I want to make myself clear. Our epidemic began before the Christmas holidays. There was quite a demand to close the schools at that time. Had we closed the schools at that time, it would have meant turning the children out onto the streets during the holiday rush. We felt (I say because I have an advisory committee of seven men, including two physicians, and I got that committee together and took their advice) that after we canvassed the situation we would try to apply common sense. We didn't close the schools because we felt it was best to keep the children in school regularly.

After the Christmas holidays we decided that it was best then to close the schools, because we were not controlling the epidemic.

One of the gentlemen in our town had a big dance on which he had issued about five hundred invitations. When we discussed this matter concerning the schools at the Rotary Club, he was the strongest one for closing the picture shows, churches and schools. When we found he was going to have this dance we told him to call it off. He told me it wasn't any of my business, that it was a private affair.

This is the thing I want to bring before you: If it hadn't been for the backing up by the physicians of my city and if they hadn't been behind me on this thing, I would have lost out as a health officer because of that man's wealth and influence. But when those physicians were called on they gave their opinions to the man, "Certainly, if you are going to close a picture show or a church, close a dance."

So I say to you physicians, because of a solid front that we present on a subject like this can we stand or fall. If I had taken one position and the physicians of my town had taken another, or even several had taken another position, it wouldn't have meant a thing in the world to the public, but inasmuch as the physicians were solid on this matter it went over, and as far as I have heard there have been no marked criticisms.

I hope the physicians will back up the health officer, and I hope the health officer will talk freely to the physicians on these things that we are up in the air on so that we can present a solid phalanx to the people and let them respect the medical opinion as one opinion.

Dr. G. H. Wood (Batesville): I don't care to discuss the paper except that I want to mention one thing. I very seriously oppose giving the influenza vaccine during the epidemic. If you want to get any good from it, I think it should be given some time before and not wait until you feel like you have been exposed to the disease and then give vaccine.

The early part of this year two of my neighboring practitioners, as the saying goes, decided they would "take the bull by the horns" and give vaccine to each other. Before they were ready for the second dose, both of them were down with influenza of a very severe type.

Dr. B. T. Robinson (New Augusta): I should like to hear more general discussion concerning vaccine as a preventative for influenza. If anyone has had experience with reference to vaccine preventing influenza, I should like to hear it.

Dr. A. M. Harelson (Stringer): I have had considerable experience with vaccine. I didn't give it myself, but one of my neighboring physicians gave it to every man, woman and child whom he went to see. He gave it to the whole family, possibly to the horses and the cows. I don't know about that. He told them that if they weren't already infected it would keep them from having influenza, and if they had influenza it would keep them from having pneumonia.

I treated as many patients as he and I never gave a shot of serum. He reported to the county health officer in our county something over sixty cases of pneumonia. I didn't have a case of pneumonia develop.

If his reports were correct, I should say the serum helped to give his patients pneumonia rather than preventing it. I never carried serum with me, and I don't want it.

The only thing I did for my patients who had the flu was to put them to bed as soon as they sent for me and keep them in bed, sweep out their bowels with a mild purgative of some kind, and I poured hot tomato soup into them. I never had a case of pneumonia develop and I never lost a case of influenza during this epidemic. I am not talking about the 1918 epidemic.

Dr. W. W. Davis (Pelahatchie): I want to say that we have just two absolute preventatives. One is isolation. If you don't go near a case that has influenza, you are not going to take influenza. That is certain. Therefore that would come within our quarantine. I had that experience in the epidemic of 1918. If you institute quarantine you must have quarantine.

I happened to be a mayor of a sawmill town and we had pretty good authority and lots of cooperation. We closed down the schools, put the marshall on the street, and kept the children off the street and let the men go on to work. We had very few cases of influenza. Those cases we did have came on a few at a time and we could handle them. When you put a lot of people into a crowded house with influenza, you are going to have an epidemic of influenza.

The next preventative is resistance through personal hygiene, proper feeding, and so on. If you have your resistance up to one hundred per cent, you are not going to take anything.

I think we have two pretty good preventatives by prophylactic means—isolation if you have a case, keep the other people away from it, and then keep the people up to one hundred per cent resistance, because it is just a question of lowered resistance when we take disease.

Dr. T. M. Riddell (Swiftown): At the first of the season last year, that is the flu season, I was asked by a number of my people what they might do as a means of preventing influenza and why I didn't vaccinate them for this trouble. I was troubled so much on the subject that I put out word around my neighborhood that I would vaccinate fifty people who were willing to be vaccinated, free of charge as an experiment, vaccinating them with Lilly's mixed vaccine every five days. They were principally school teachers and high school pupils whom I had the pleasure of vaccinating. Only forty-two completed that course of treatment. I vaccinated them every five days for free inoculation. Out of the forty-two, only about eleven cases, as I remember it, reported to me as having had a marked cold or light attack of influenza. One case had a very severe attack of influenza, with a lobular pneumonia following.

While I am here I want to bring out two points regarding influenza that runs a temperature of 102° or 105° for a few days. It is a difficult matter to find out what is causing it with your stethoscope. In these cases I always suspect a lobular pneumonia or some milder trouble. More frequently you will find a lobular pneumonia; that is, it is there whether or not you find it. You can't always find it.

Regarding what some of the doctors said about the immunity to this disease among the negroes, I have seen in my practice two colored people to one white sick from all troubles. I have never kept correct data on it, but just on the face of it now, it seems to me that the negro is very much more susceptible to the disease than the white race, because usually the negro in my section will go in and bar up his door with anywhere from five to ten in the house and if they find a little auger hole or cat hole in the door they stop that up too. They all sleep in there and if there is one infected with influenza, on the following morning they will probably all have it. I would say they are probably more susceptible to influenza than the white people.

Dr. W. L. Stallworth (closing): I should like to make two points. One is the question of closing schools. It is the concensus of opinion that there is an advantage to closing schools.

Regarding the incidence of influenza among the colored, throughout the state we had about half as many reported among the dark as we had in the white. I think it is a general fact that negroes are more susceptible to pulmonary infections than the white race.

Thank you.

OSTEO-CHONDRO-SARCOMA.*

GEORGE A. BROWN, M. D.,

WATER VALLEY, MISS.

Osteo-chondro-sarcoma is a malignant tumor of the connective tissue variety. It is a combination of sarcoma with bone and cartilage. Usually these acessory forms of connective tissue structure play a subsidiary part in the metastatic activities of the growth. I believe that the subject of bone sarcoma is one that we know very little about and presents one of the most difficult problems the surgeon is confronted with today. Co-operation between the pathologist and surgeon is absolutely essential. In order to determine the type of tumor, it is necessary that sections be made and examined by the pathologist.

The classification of bone tumors adopted by the American Registry of Bone Sarcoma is one of the simplest and best and is as follows:

1. Metastatic tumors, whose primary seat is in tissue other than bone.
2. Periosteal fibrosarcomas.
3. Osteogenic tumors
   (a) Benign
   (b) Malignant
4. Benign giant celled tumors
5. Angiomas
   (a) Benign
   (b) Malignant
6. Ewing's tumors
7. Myelomas

DIAGNOSIS.

The operation will largely depend upon the laboratory report. A careful history and roentgenograms properly taken at right angles will also aid in clearing up the uncertainty of the outcome of many of these cases. The great uncertainty which exists in the diagnosis of bone sarcoma on clinical grounds should be taken into account in any consideration of the reports of cases successfully treated which appear from time to time in surgical literature. Codman points out that this percentage of error is, at the present time, in the neighborhood of fifty per cent. Bone sarcoma occurs in the neighborhood of the knee joint in about eighty per cent. Osteomyelitis is frequently diagnosed and treated as sarcoma especially if the infectious organisms are staphylococci of low virulence. In children infection of the bone is more common than malignancy. However, the commonest age for sarcoma is in the second decade. It occurs more frequently in youth than in old age. No case of congenital bone sarcoma has ever been reported. Cases arising after the age of fifty are excessively rare.

There are five points of special interest in the diagnosis of bone sarcoma:

1. Onset of pain. This is an early and constant symptom.
2. General condition of the patient: Sarcoma, as a rule does not develop in an unhealthy person. Probably some other condition if patient is in bad general health.
3. Duration. Pain is at first bearable and patient does not seek advice before a month or two.
4. Age. More frequently seen in youth. Rarely after fifty.
5. Rapidity of growth. After the first month osteogenic sarcomata show a steady enlargement. As a rule, they increase in size slowly but progressively. A small round cell sarcoma is the most malignant type and grows very rapidly.

As a rule, bone sarcomata are usually extensive when first noticed and involve the surrounding tissue. Sarcoma rarely involves the neighboring joint till late in the course of the disease.

*Read before the Section on Surgery, at the Sixty-second Annual Session of the Mississippi State Medical Association, Gulfport, May 15, 1929.

TREATMENT.

Early amputation is the method of choice. More cases are saved by amputation than by any other form of treatment. Coley's fluid, roentgen-ray therapy and radium seem to have little or no effect.

CASE REPORTS.

(1) E. T., school boy, aged 16 years. In September 1928 he began to notice pains in his left knee. The pain was more severe when he would run and play. About one month later he noticed swelling on the outer side of the knee. This rapidly and progressively increased in size. The family history was negative. He had the usual diseases of childhood. Left forearm had been fractured twice. There was no history of injury to the knee. Attack of colitis at the age of four. General health always had been good, appetite good, bowels regular. Examination showed a rather symmetrical firm enlargement, apparently springing from the lower end of the femur, and which appeared to be attached to the surrounding tissues. The mass was not bony hard but moved as the femur moved. There were no enlarged lymphatic glands. Roentgen-ray examination showed a tumor mass springing from the lower and outer aspect of the femur, which presented considerable bone destruction. Roentgen-ray examination of the upper two-thirds of the femur appeared normal. There was no metastasis to the lungs. Urinalysis and blood Wasserman negative. Pathological report: Osteo-chondro-sarcoma. Operation Dec. 14, 1928. Under ethylene anesthesia amputation of the upper third of the thigh. Wound healed by primary union. Patient's convalescence was uneventful. Since operation patient's general health has improved and there has been no recurrence.

(2) E. G. aged twenty-nine years, white male, married, came to me Jan. 4, 1925, complaining of a lump in the right buttock. He stated that about three weeks previous he noticed the lump, and that it had progressively increased in size. It had never caused him any pain or discomfort except on one occasion after walking fifteen miles. Examination showed a somewhat rounded tumor mass in the right gluteal region, about midway between the great trochanter and the tuberosity of the ischium and a hand's breadth below the level of the crest of the ilium. The mass appeared to be adherent to the surrounding structures. There were no enlarged lymphatic glands, and there was no loss of weight. Urinalysis and blood Wasserman negative. Reflexes normal. On Jan. 15, 1925 the tumor growth was removed and found to be osteo-chondro-sarcoma. Following removal the patient was given deep roentgen-ray therapy. On Oct. 30, 1925 patient entered hospital with a recurrence in the site of the first operation. Physical examination was negative except for re-appearance of the growth. Extensive resection was done and the operation followed every three weeks with deep roentgen-ray therapy. Examination Feb. 3, 1926 did not show any further evidence of metastasis. He remained in good health and worked every day until June 10, 1928 at which time he contracted influenza. His convalescence was prolonged and he began spitting up blood. Roentgen-ray examination revealed numerous metastatic nodules throughout both lungs. Patient died Oct., 1928.

(3) Patient, a single woman, aged twenty-one years, was admitted to the hospital, Sept. 29, 1925, with a large chondro-sarcoma of the left index finger. She stated that some eighteen months before admission the growth started as a white mark resembling a blister, and that it grew slowly. At first it was very soft, but it gradually increased in hardness. During the previous two months, it had been growing rapidly. She said she had experienced no pain until a week before she was seen, and that she only came for advice because of the inconvenience caused by the size of the growth. There was no past history of rickets. On examination, a tumor the size of a billiard ball was seen on the palmer surface of the index finger of the left hand. It was situated on the proximal phalanx. It was fluctuating in part, had a broad base, and the skin was nowhere adherent. Roentgen-ray examination showed destruction of the shaft of the proximal phalanx of the index finger and a large soft tumor extending outward, which contained several areas of ossification. Examination of the chest negative. Operation: The index finger and distal half of the second metacarpal bone were amputated. Microscopical examination showed tumor to be chondro-sarcoma undergoing myxomatous degeneration in parts. Examination of the hand, Feb. 28, 1926 showed a painless scar. The movement and gripping power of the fingers were good, and the patient experienced but little inconvenience. There was no clinical or roentgen-ray evidence of metastasis to the lungs or locally in the region of the scar.

SUMMARY.

1. Importance of a careful diagnosis.
2. Osteo-chondro-sarcoma is a malignant growth, and causes death by metastasis.
3. Routine roentgen-ray examination of the lungs in all suspected malignant bone tumors.
4. Amputation, early, offers the best chance for cure. Roentgen-rays, radium and Coley's fluid probably do some good subsequent to operation.

DISCUSSION.

Dr. A. Street (Vicksburg): Gentlemen, I think the doctor should be complimented on his timely and excellent paper. His subject is "Osteo-chondro-sarcoma." That conveys to my mind some type of bone sarcoma. I don't believe it makes much difference whether it is osteo-chondro-myxosarcoma, or which tissue is in predominance. Of course differentiation of malignant tumor comes in the form of the type of tissue. An osteo-sarcoma, with a great deal of osteoid or osseous tissue is more easily differentiated than one without osteoid or osseous or sarcomatous or fibrous tissue. In the long run, they are all bone sarcomata and are all very extremely bad from the standpoint of pronosis.

In the diagnosis, of course the tissue section, after thorough history and physical examination, is very important.

There is one point in the diagnosis which may be of great importance. The doctor said that osteomyelitis might be mistaken for bone sarcoma. On the other hand, bone sarcoma has been more than once mistaken for osteomyelitis, especially the Ewing's type of tumor, not only by the clinician but also by experienced pathologists. Experienced pathologists have passed on bone sarcoma as osteomyelitis. The Ewing's tumor and especially the rapidly growing types of osteogenic sarcoma are very liable to respond, in some degree, to roentgen-ray therapy. The Ewing's tumor responds to a very extensive degree to radio-therapy. That can be and is used as the diagnostic method. If you subject an osteomyelitic process to radio-therapy it does not improve. If you subject a suspicious bone lesion, which may or may not be osteogenic or Ewing's type of growth or some other type of bone sarcoma, to radio-therapy and get a very prompt and satisfactory recession, you have gone a great way in the diagnosis. Of course it is taken for granted in your radical treatment of these bone sarcomas, if you are contemplating an amputation, that you have subjected the other portions of the body (the lungs and other bones) to thorough radiographic examination to be sure that you have not already a metastasis somewhere else. There is no value in operating one lesion if you have metastasis elsewhere.

Dr. George A. Brown (closing): I have nothing further to add. I appreciate Dr. Street's discussion. The main point that I wished to bring out was that these tumors are highly malignant. Unless we get them early, amputation is the only thing that is going to give any results. Occasionally we will be able to save a life by amputation, but, in my opinion, to try roentgen-ray or radium is a waste of time.

We know that in sarcoma metastasis takes place through the blood stream, while in carcinoma it takes place through the lymphatic system. For that reason, I think early operation will give better results than any other form of treatment.

PROSTATIC OBSTRUCTION.*

W. H. SUTHERLAND, M. D.,

BOONEVILLE, MISS.

In the sixteenth century, Massa discovered the prostate gland, this being the first mention of it as an organ of which we have any knowledge. In the seventeenth century, Riolan discovered that it would obstruct the outflow to the bladder. It was not until 1866 that Kuchler did the first radical removal of this gland on the cadaver. Billroth, in 1867, did a radical operation on the living. Goodfellow, in 1890, began the removal of this gland by the perineal route. Fuller, in 1895, began the removal by the supra-pubic method.

It is not within the scope of this paper to discuss the prostate gland in all its phases, but to pay special attention to the pre-and post-operative care. No subject can be discussed from any angle intelligently unless a little background or foundation be laid by giving at least a short history of it. Very little was known about the treatment of prostatic obstruction till the last three decades, and by far the larger part of this knowledge has been gained during the last decade. About all that we knew to do twenty years ago was to relieve the complete retention by supra-pubic cystotomy, when the patient could not be relieved by catheter, and follow this by removing the gland by the method best suited to the case. Nothing was known about blood chemistry and how important it is to know the percentage of blood urea, etc. Very little was known about the importance of preoperative drainage and the question of fluids, as well as the findings of cystoscopy.

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*Read before the Section on Surgery, at the Sixty-second Annual Session of the Mississippi State Medical Association, Gulfport, May 16, 1929.

The cause of enlargement of the prostate gland has not yet been definitely settled; some of the authorities still hanging to the question of Neisserian infection as being the most probable cause. The concensus of opinion now, I believe, however, disagrees with this as the most probable etiology and lays it to a natural process of senility.

The all important thing to ascertain when one is suffering with the symptoms of prostatitis, with which you are acquainted, is the diagnosis; and not only to say whether or not the gland is hypertrophied but the probability of a malignancy being present.

This can not by any means always be done, but one who has had years of experience with hundreds of these cases may, in a large majority of instances, say if the case in question is or is not malignant.

In the preparation of a patient for operation there are many things to consider; first, if it is not an emergency case a general examination is done giving special attention to the heart, arteries, and urine. A routine roentgen-ray of the urinary tract is made in order to ascertain the presence or absence of renal, ureteral or vesical calculi.

A functional test is made of the kidney out-put of solids, the bladder is emptied voluntarily and then catheterized for any residual urine. Immediately following this, or even prior to this, the test for blood urea is made. Urea was discovered in the urine in 1723 by Rouelle when he, at the same time, established the significance of urea in nitrogenous metabolism. Prevost and Dumas demonstrated the relation of the kidney to the excretion of urea in 1823. Urea was first formed synthetically from inorganic constituents by Wohler in 1828 and this was the inception of organic chemistry and the beginning of biologic chemistry. The increase of urea in the blood indicates a retention due to decreased activity on the part of the kidney.

It has not been my practice to use the cystoscope routinely, reserving it for use only for such purposes as if for any reason I should suspect a tumor or cancer of the bladder, vesical diverticuli or in some cases for pyelitis.

It is reported by Judd that about five per cent of operative prostate cases have diverticuli of the bladder. For that reason it is good practice to make a cystogram in all cases when practicable.

All these examinations of which I have spoken can not be made on emergency cases, but the question of drainage immediately presents itself. This can either be done per urethra or supra-pubic, and often we have no choice, as a large portion of our old men enter the hospital completely obstructed and a catheter can not be passed.

I have heard this subject of drainage discussed many times, but my plan has been to do a supra-pubic drainage, unless there are special contra indications for it. If the bladder is completely blocked and a catheter can not be passed I open down to the bladder under a local anaesthetic, push a large trocar and canula into it and on removing the trocar quickly push in a rubber catheter slipping the canula over it letting the bladder wall close around the tube and only allowing a portion of the urine to escape by clamping the catheter with a hemostat, then closing the wound, usually with silk worm gut. Should there not be complete retention, or if so, after a catheter can be used, I then fill the bladder with a weak solution of potassium permanganate and open the bladder in like manner, or by opening it with a knife after placing a purse string suture in the bladder wall and then using a mushroom catheter. The time of drainage depends on the percentage of blood urea, the functional kidney test, the residual urine, and the general condition of the patient. The larger the amount of residual urine and the freer of infection, the longer the drainage as a rule.

With a patient of average age, say sixty or seventy years, with a blood urea of 14 to 20 mgms. to the 100 c. c., and no other

complication, I allow to drain two weeks. I find those cases get along better who have infection of the bladder which has subsided. This cofferdams the bladder wall against the infection that follows the removal of the gland. During the time of drainage they should be given an abundance of fluids with some alkali, such as sodium citrate in 20 to 30 grain doses four times daily, and just as soon as possible get them up in a chair and on their feet.

I have often allowed them to return to their homes where they feel much better satisfied and can have a wholesome diet and their ordinary surroundings. They do better. In certain cases I have allowed them to drain for three or four months. I like to be quite certain that the blood urea is at least below 20 mgms. to the 100 c. c., that the urine is, or has been, full of pus, and has had time to form a protective wall against outside infection; that the appetite has returned to normal, and that the general condition is as near normal as can be expected.

There is a class of patients with obstruction to which I wish to call your attention: An old man with a very slowly growing prostate obstruction which is so insidious that there is more of a discomfort than a pain, and which proceeds so surely that sooner or later the bladder wall becomes very thin and loses its tone, and becomes so greatly distended that the pressure backs up from the bladder causing the kidneys great embarrassment. This is the kind of patient that has hiccough, vomiting, delirium, is restless by spells, dehydrated, constipated, and becomes listless. This also is the kind that should have the most careful caution about emptying the bladder too suddenly or too completely. In these long standing distentions the bladder wall can not follow up the space evacuated by the sudden emptying and consequently the blood rushes to fill the blood vessels which have been so pressed and a hemorrhage is very likely to occur, also causing the kidneys to suddenly shut off. This patient must be drained very gradually allowing only a portion of the urine to escape at once, allowing the bladder wall to very gradually retract following the loss of urine, and at the same time gaining its tone. We usually find one of this type to have a high blood urea. He should be intermittently drained as stated above, or allowed to drain by the method used by Bumpus. After putting in a urethral catheter and attaching a long tube to it, letting this tube pass upward into a can just high enough to allow the urine to drop into it and lowering the can each day by a few inches, and then keeping the patient full of saline by intravenous method or by hypodermoclysis. The Murphy drip can not be depended on sufficiently to be used alone.

After the patient is prepared, which requires from two weeks to three or four months, I remove the gland by way of the supra-pubic method by opening through the same incision staying near the pubic arch in order to prevent rupturing into the peritoneal cavity for by this time the tissue has become very friable. With my left index finger in the rectum and my right one in the bladder, I plunge into the post urethra and break into the line of cleavage of the gland and follow this as closely as possible, shelling it out. Some are much easier than others. We often encounter those glands that are fibrous and are very hard to separate; others shell out easily. This being completed I mop the cavity with hot sponges and inspect for large bleeding vessels. I realize that later often severe hemorrhages occur and require stopping by some pressure apparatus such as the Pilcher bag, but I have been fortunate so far in not having had a severe hemorrhage. After thoroughly satisfying myself that no large vessels are open I put a large tube into the bladder cavity being careful not to have it long enough to impinge on the bladder base, as to do so would cause intense straining and tenesmus. I close the bladder wall, fascia and skin separately when possible and I am always very careful not to close

the tissues too closely around the big tube, and, also that this tube is not against the public bone. Such, in either case, would easily cause pressure necrosis causing extensive suffering and slowly healing.

I do not leave this large tube in more than forty-eight hours, and often remove it in twenty-four hours. Just as soon as the urine clears and all clots are out, this tube has served its purpose and should be taken out. The walls of the wound fall together and begin to close. I let the urine be absorbed by large dressings, changing as often as needed. Also I begin at once to spread zinc oxide ointment around the wound on the skin to save the skin from excoriation by being urine-soaked. I pass a sound into the bladder per urethra every few days as soon as the soreness begins to leave.

At the time of the operation, should the peritoneum be ruptured as spoken of above, my usual method is to place a large gauze pack against this place holding in the contents as well as possible and proceed with the operation. After finishing, I sew up the rent and place into the peritoneal cavity a small drainage tube leaving it in about two or three days. I have never had any serious trouble by this accident. I never irrigate the bladder or bother with it in any way after the operation, unless infection and sloughing take place, preferring to let nature care for the wound and the clots which form in the cavity left. I have never so far had a serious hemorrhage.

There are a few important symptoms that we must look out for post-operatively; one is to see that there is plenty of drainage, another is to keep the abdomen clear of gas both in the intestines and stomach and combat shock and stupidness with heat, saline, glucose, and blood transfusion if needed. Remove gas by enema and gastric lavage. I think it much better and easier to prevent shock and stupidity than to have to relieve them after allowing them. To prevent both these, I give the pre-operative care explained, and use a local anaesthetic and ethylene during the operation. The patients are all old men and bad risks at the best so we should be very careful to keep them perfectly warm before, during, and following the work. Often a death is caused by taking a slight cold just following the operation, especially if the patient is allowed to get too warm and while in a profused perspiration he should become suddenly chilled by carelessly allowing a draft of air on him.

A good procedure is to give pantopon, grain 1/6 and hyoscine, grain 1/200 one hour, and fifteen minutes respectively preceding the operation.

There are several complications post-operatively even after the patient has been dismissed and gone to his home, one of which is the gradual closure of the urinary outlet from scar tissue formation following the removal of the gland and which requires dilatation by properly sounding if seen in time, but these cases sometimes return several months or years after dismissal with a complete closure of the outlet, all the urine draining through the supra-pubic fistula. This has happened in two of my cases and I had to open the urethra per perineum dilating it and allowing the bladder to drain through a tube inserted for several days until the ventral fistula closes. The last made opening usually closes spontaneously in a short time.

DISCUSSION.

Dr. T. W. Holmes (Winona): I want to thank Dr. Sutherland for his paper. He covered practically everything that could be covered. The only thing I want to mention is a case where there is an enlarged prostate with an interstitial nephritis. In those cases we depend on kidney function tests to tell us whether to remove the prostate.

A kidney function test is very, very deceptive, however.

I enjoyed the paper very much. I do not want to take up your time because there is nothing that I could add.

Dr. John C. Cully (Oxford): I don't want to prolong the discussion, but I do want to con-

gratulate Dr. Sutherland on his excellent paper. There are so many points regarding this condition which would take a long time to cover. There are a few which I should like to enumerate.

The subject of Dr. Sutherland's paper was "Protastic Obstruction." He confined his remarks solely to prostatic hypertrophy of old age, so I shall not go into the other causes of protastic obstruction.

The first thing I should like to call attention to is the advantage of taking a roentgen-ray picture of these bladders, not so much for the diverticula that might be present, but the calculi. After you go into the bladder it is possible sometimes to overlook a small stone which will give trouble even after the operation.

Again there is always a possibility of this obstruction being due to a dunce-cap, middle lobe, and a prostatic removal is absolutely unnecessary and a lot of old people might die following an operation. In that condition I think the punch operation is by far superior to prostatic removal.

It is to be regretted that every community hasn't an urologist or someone to do this particular field of work. It falls into the hands of those who are doing general surgery to relieve a lot of cases whom we cannot refer to a specialist. I am a crank on specialists. I believe we all ought to learn one thing and learn it well, rather than try to do too much. This one particular field, I believe, comes under the heading of urology and should be sent to the urologist. But, as I say, a lot of people, because of their social status and because of acute conditions, come to us for relief. Those are the patients, I believe, who are appreciative of having something done for them.

I think cystoscopic examination is very important where cystoscopy is possible. I don't believe any trauma should be produced by the cystoscope. Where possible, I think cystoscopy should be performed, the bladder wall examined thoroughly for new growths, or the interior of the bladder examined for calculi.

The next thing that I think is by far the most important of all as far as operation is concerned is anesthesia. In a series of cases which I had, I had two deaths following anesthesia. I rather wanted to back off from doing prostates after that.

Since I commenced to use spinal anesthesia (and when I say spinal anesthesia I mean controllable spinal anesthesia) in a series of twenty cases of prostatectomies, in which the known prognostic intention of those cases was about forty-five, I have had absolutely no post-operative complications. I have had a perfect recovery of every patient, and during each operation the patient was able to laugh and talk with me and I had no trouble.

Along this line I should like to digress for just a moment and go back to drainage. Dr. Sutherland spoke of drainage. Where possible, I think drainage should be carried on through the urethra. If it is impossible to get into the bladder, as he stated, which is so in a large percentage of cases, I think a suprapubic drainage should be done, of course. If you can get into the urethra and connect that catheter to a little connecting tube and carry that to a bucket or container which can be elevated so that the bladder cannot empty all at once, you are then, by gradual drainage, relieving the kidney of the pressure which has been put upon it; and by daily irrigation of that bladder with one-half of one per cent of silver nitrate solution you will rid the bladder wall of a great deal of infection before the operation.

There is one point with reference to the control of hemorrhage and to visualizing the field of operation. When you use spinal anesthesia (and I think spinal anesthesia is preferable to sacral block because sacral block must be used in the hands of an expert) there is absolutely no chance of not getting anesthetization. By putting the patient in the Trendelenburg position, you get anesthesia in the spinal canal, but you get a perfect blocking of the field of operation below the point of injection. When you do that, the intestinal tract simply drops out of your way, the peritoneal folds hang back as far as possible, and there is no danger of going into the peritoneal cavity if you are careful. Retract with the Murphy retractor and then go in and see what you are doing. You can use an abdominal light, such as the Cameron light, the new light which Cameron has put out with the abdominal retractor on the end, and you will have a perfect visualization of the field.

Then by blunt dissection through the top of the prostate you can start in the bladder wall and dissect with your finger or a blunt instrument and remove as you would a tonsil. You have your field before you, and when you get through you simply have a little opening in the mucous membrane of the bladder and you have the opening where the prostate came from.

Dr. W. W. Eley (Biloxi): I am not a urologist and I don't propose to discuss the doctor's paper. I do want to state that I am a victim of a diverticulum which was removed in 1927. I went

through tortures of all kinds before I really found what was the trouble. I had my teeth, there was some pus in the urine, which as you all know is a common occurrence in lots of cases with no prostatic trouble or diverticulum. In my particular case the pus was heavy. The first thing I did was to have my teeth extracted. I went further and had my tonsils removed. Later I went to a urologist, in fact two or three urologists. I went to the best in the country, I thought, and he fell down completely. Of course, he didn't go far enough to help my case. He didn't take a roentgen-ray picture of the bladder, and he didn't do a cystogram, which was the reason for his not locating my trouble.

I finally got on the right track and had the diverticulum removed. Since then I have been feeling a whole lot better, but still I have to have another operation, possibly this summer. I intended to have the prostate removed in 1927, right after the other operation, but I had a complete suppression of the urine and didn't think it wise to do it at that time.

Dr. W. H. Sutherland (closing): I want to thank you gentlemen for the liberal discussion of my paper. I have no desire to extend the time for any further discussion.

COMPOSITE STATISTICAL STUDY OF CHARITY HOSPITAL SURGICAL DEATHS.*

FRANK L. LORIA, M. D.,

NEW ORLEANS.

At the suggestion of your Chairman, Dr. Peter Graffagnino, your Secretary has undertaken a composite statistical study of all the cases, considered in groups, coming under the supervision of this section. The monthly meetings during 1928 and 1929—running from September to March, inclusive—consisted, in addition to the usual business, of a survey of several interesting cases selected from the death group of the preceding month, and an analytical survey of the cases admitted to each sub-section with the deaths in said sub-sections, and their mortality rate. As this is the last meeting at which your present Chairman, Dr. Graffagnino, will preside, he has suggested and asked me to undertake to compose statistical tables which would show the work of the individual meetings as composite figures running from the cases of the month of September, 1928, to the cases of the month of March, 1929, inclusive.

These tables were compiled from the data at hand; that is, the data given out each month and of which each member received one copy. The Surgical Staff is composed of the general surgery, orthopedic, fracture, surgical diseases of children, gynecology, obstetrics, genito-urinary, eye, ear, nose and throat, and skin services. In this survey the general surgery, orthopedic, fracture, and surgical diseases of children sections are grouped in one, while the others are grouped separately.

A review of this data gives us very interesting information. To begin with, the total number of admissions to each group is given as well as the number of deaths and the mortality rate. An outline giving the diagnosis in the fatal cases follows each group, and just a glimpse through this again furnishes one more data for speculation. Secondly, the mortality rate in each group with the differences in the different groups again gives us interesting information; and finally, although this survey covers only a period of seven months, it is of sufficient length to give one a satisfactory knowledge of the work being done by the surgical section of the Hospital Staff.

The figures reveal an interesting comparison of the various groups. The highest mortality rate is found in the surgery group (which includes general surgery, surgical diseases of children, orthopedics and fractures), a rate of 6.26 per cent. The genito-urinary group is next with a figure of 4.5 per cent, while the eye, ear, nose and throat group shows a mortality of only .68 per cent. When one takes into consideration the fact that the first group includes all

*The following report was presented at the meeting of the Charity Hospital Surgical Staff, October 16, 1929. It was deemed of sufficient interest and importance to publish as a contribution to medicine in the scientific section of the Journal, rather than appearing in the Transactions of the Surgical Staff of the Charity Hospital.

accidents and homicides with their complicating injuries, as also the hopelessness of the many genito-urinary cases on first admission to the Hospital, it is little wonder that the figures are not even higher. For example, of the 317 deaths attributed to surgery, 156 were accident or homicidal cases, 6 were cases of cerebrospinal syphilis, 6 of congenital syphilis, and 1 of syphilitic endocarditis. The syphilitic cases, although their deaths occurred in medical services, the credit for same is turned over to the department of surgery. Again of the 57 deaths credited to the genito-urinary group, 15 were cases of prostatic hypertrophy, and since this is admitted to be a disease of the old, we can again readily understand the figure on the mortality rate opposite this group.

The mortality rate of the surgcal section of the Hospital Staff, according to this data, is 3.73 per cent. This, of course, includes all the groups named above. A rate of 3.73 per cent we must admit is one which certainly can be pleasingly placed alongside the mortality rate of the other great hospitals of the country. When we consider that about 95 per cent of all serious accidents are hurried to Charity Hospital for care, we certainly must acknowledge the good work of the resident and visiting staffs. Certainly, it is through the interest and untiring efforts of the surgical staff that the hospital is able to hold its head up in pride.

A consideration of the various groups, with the figures are herewith presented:

COMPOSITE STATISTICAL STUDY OF CHARITY HOSPITAL SURGICAL DEATHS OCCURRING DURING MONTHS OF SEPTEMBER, 1928, TO MARCH, 1929, INCLUSIVE. DATA COMPILED FOR RECORDS OF THE SURGICAL STAFF TRANSACTIONS.

SURGERY.

(Including Orthopedics, Fractures, and Surgical Diseases of Children)

Total Number of Admissions	5059 cases
Total Number of Deaths	317
Mortality Rate	6.26

Death cases classified as follows: cases

1.	Appendicitis	15
2.	Accidents and homicides (with complications):	
	a. Burns	33
	b. Fractures	31
	c. Gunshot Wounds of:	
	1. Head	6
	2. Neck	3
	3. Chest	4
	4. Abdomen	9
	5. Back	1
	6. Extremities	3
	7. Entire body (bird shot)	1
	d. Head Injuries	48
	e. Incised and stab wounds	9
	f. Crush injuries and injuries to entire body	12
3.	Carcinoma of:	
	a. Esophagus	1
	b. Lip	1
	c. Neck	3
	d. Transverse colon	2
	e. Stomach	8
	f. Face	1
	g. Jaw	2
	h. Intestine	2
	i. General	1
	j. Breast	1
	k. Rectum	3
	l. Gall-bladder	1
	m. Liver	1
	n. Soft palate and tongue	1
4.	Cholecystitis	4
5.	Fistula, fecal	1
6.	Gas bacillus infection	2
7.	Goiter (Toxic adenoma and exophthalmic)	3
8.	Meningo-myelocele	1
9.	Obstructions (Intestinal):	
	a. Strangulated (Inguinal) hernia	7
	b. Intestinal obst., cause not given	1
	c. Intussusception	2
	d. Strangulated umbilical hernia	1
	e. Caused by adhesions	2
	f. Volvulus	2
	g. Incarcerated epigastric hernia	1
	h. Sarcoma of large bowel (Hepatic Flexure)	1
	i. Strangulated femoral hernia	1
	j. Imperforate anus (Congenital atresia)	2
	k. Strangulated incisional (umbilical hernia)	1

10. Osteomyelitis (acute) 5
11. Osteomyelitis (chronic) 1
12. Abscess of:
    a. Liver 3
    b. Subdiaphragmatic 2
    c. Alveolar 1
    d. Thigh and leg (Septic arthritis) 1
13. Tetanus 7
14. Hemorrhoids 1
15. Inguinal hernia (right) 2
16. Gangrene:
    a. Diabetic 5
    b. Senile 2
    c. Berger's Disease 1
    d. Raynaud's Disease (feet) 1
    e. Infective 1
17. Sarcoma of:
    a. Jaws 1
    b. Mesentery involving small intestine 1
18. Gastric ulcer 5
19. Dilatation of duodenum 2
20. Ruptured spleen 1
21. Cellulitis of face 3
22. Tuberculosis spondylitis 3
23. Cerebrospinal syphilis 6
24. Congenital syphilis 6
25. Syphilitic endocarditis 1
26. Congenital malformation of brain 2
27. Papilloma of rectum 1
28. Empyema 5
29. Carbuncle of neck 2
30. Ruptured varicose veins 1
31. Retroduodenal hernia 1
32. Congenital malformation of spine 1

GYNECOLOGY.

Total number of admissions ..... 2025 cases
Total number of deaths 31
Mortality rate 1.53
Death cases classified as follows:

1. Abortions (incomplete) 2
2. Abscesses (pelvic) 3
3. Carcinoma of—
    a. Cervix 5
    b. Vulval 1
4. Uterine fibroids 9
5. Salpingo-oophoritis—
    a. Acute 2
    b. Chronic 4
6. Endometritis 1
7. Pseudomucinous cyst of ovary (right) 1
8. Papillocystadenoma of ovary 1
9. Vomiting in pregnancy 1
10. Ruptured ovarian cyst 1

OBSTETRICS.

Total number of admissions 2381
Total number of deaths 65
Mortality rate 2.7
Still-births 56
Death cases classified as follows:

1. Prematurity (intracranial hemorrhage) 44
2. Parturition—
    a. Cause not given 1
    b. Hemorrhage 3
    c. Eclampsia 2
    d. Acute nephritis and pneumonia 3
    e. Puerperal septicemia 6
    f. Retained placenta 1
    g. Placenta praevia 1
3. Miscarriages 1
4. Toxemia of pregnancy 1
5. Premature labor 1
6. Incomplete abortion 1

GENITO-URINARY.

Total number of cases 1266
Total number of deaths 57
Mortality rate 4.5%
Death cases classified as follows:

1. Carcinoma of penis 1
2. Granuloma inguinale and syphilis 1
3. Incontinence (urine and feces), Lues 1
4. Hypertrophy of prostate 15
5. Pyelonephritis 4
6. Strictures (urethral) 11
7. Tumor of adrenal 1
8. Pyelonephrosis 2
9. Pyonephrosis 3
10. Carcinoma of—
    a. Prostate 3
    b. Bladder 5
11. Syphilis and gonorrheal urethritis 1
12. Perinephritic abscess 2
13. Acute retention (Prob. carc. of bladder) 1
14. Hydrocele 1
15. Perineal abscess 1
16. Hypernephroma (bilateral) 1
17. Abscess of prostate 1
18. Hypernephroma (single) 1
19. Chronic interstitial nephritis 1

EYE, EAR, NOSE AND THROAT.

Total number of admissions 2190
Total number of deaths 15
Mortality rate 0.68%
Death cases classified as follows:

1. Chronic mastoiditis and brain abscess 1
2. Otitis media 4
3. Acute mastoiditis 1
4. Mastoiditis 1

5.	Carcinoma of esophagus	1
6.	Foreign body in larynx	1
7.	Fractured larynx	1
8.	Cavernous sinus thrombosis	1
9.	Foreign body in bronchus	1
10.	Acute conjunctivitis	1
11.	Sarcoma of eye	1
12.	Foreign body in trachea	1

SKIN.

Total number of admissions	185
Total number of deaths	5
Mortality rate	2.7%
Deaths classified as follows:	
1. Impetigo contagiosa	1
2. Arsenical dermatitis	1
3. Erysipelas of right leg	1
4. Diagnosis not given	2

CASE REPORTS AND CLINICAL SUGGESTIONS

PURPURA HEMORRHAGICA VERA*.

R. H. POTTS, M. D., and
REBECCA M. STRAHAN, M. D.,
NEW ORLEANS

Purpura hemorrhagica has been defined by Minot as a condition characterized by hemorrhage from mucous membranes, petechiae or echymoses of the skin, a markedly reduced platelet count, a much prolonged bleeding time, and a non-retractile blood clot.

Werlhof in 1731 first differentiated the condition from other varieties of hemorrhagic diseases. Denys in 1887 noted the platelet reduction. Kaznelson first showed the striking results that follow splenectomy.

We wish to present the following case which was admitted to the Baptist Hospital, New Orleans, La., on February 21, 1929, with the classical signs of purpura hemorrhagica vera, namely:

1. Decreased platelets.
2. Failure of blood clot to retract normally.
3. Increased bleeding time.
4. Slight disturbances of coagulation time.
5. Positive tourniquet test.

Since these cases usually present themselves in a form easily diagnosed, it is not from the standpoint of diagnosis that we present this case, but from our interest in the disturbed mechanism of the factors concerned in blood clotting.

The classification of hemorrhages and the mechanism of blood clotting is still in the experimental stage, so in presenting this case, we merely suggest a few points which we have deducted from the present literature on hemorrhage and blood clotting.

CASE REPORT.

The patient, a white female child, aged 6 years, was seen because of bleeding from the teeth and gums. On February 18, about 7 P. M., the mother pulled a tooth, which had been loose for several days. The bleeding did not stop, so about 11:30 P. M., the patient was carried to a nearby drug-store, and was given some Monsell's solution as a mouth wash. The bleeding continued and the following morning, February 19, she was carried to Dr. B. H. Gunter, dentist. Dr. Potts was called during that afternoon, and gave her a subcutaneous injection of fibrogen (Merrill). No hemastasis resulted. The bleeding readily stopped after an oral administration of the same substance. At the point of the subcutaneous injection, a hematoma, about the size of an orange, was formed. The bleeding resumed after 2½ hours and continued with the exception of periods of two or three hours following repeated doses by mouth of fibrogen until the time of admission to the hospital, February 21. On entrance to the hospital, blood was flowing from the socket of a recently pulled tooth, around several carious teeth, from a sinus of an upper molar, and from several points on the mucous membrane of the oral cavity. Adrenalin was applied and cotton pledgets were placed firmly against all bleeding points. These had to be continuously changed during the entire day. At 8 P. M., February 21, the patient was given 110 c.c. of whole blood by transfusion. The bleeding

*Read at the Regular Staff Meeting, Southern Baptist Hospital, June 8, 1929.

readily stopped, but resumed itself after eight hours. The following morning, February 22, she was given 8 c.c. of whole blood intramuscularly, and the bleeding stopped for about twenty hours. February 23, she was given 8 c.c. whole blood intramuscularly, which controlled the bleeding for a day and night. On February 24, she was given 4 c.c. whole blood intramuscularly, which controlled the bleeding about twenty hours. February 25 she was given 8 c.c. whole blood intramucularly, and bleeding ceased from thirty-six to forty hours. February 27 and 28, she was given 8 c.c. whole blood each time. She was discharged February 28, with no bleeding for the past thirty-six hours and no more bleeding.

The general condition of the patient was good. She was regularly constipated. She has had no blood in the stools. There has been no new hematomata. For the past few months, the mother has noticed unaccountable blue spots over the body.

Past Medical History: She was a full term, low forceps delivery, and grew up apparently normally. Had mumps in 1928, and has had no other illness. She has never previously manifested any evidence of prolonged bleeding when injured.

Family History: Father is living and well. Mother is well and living. Mother has had no miscarriages. There is no history of hemophilia or chronic diseases.

Physical Examination: White female, aged 6 years, well developed, and well nourished, not acutely ill, but appeared rather anemic. The skin was warm, moist and pliable. There was no rash, but many petechiae were present over the body, and especially about any joint where the slightest pressure had been applied. Large purpuric spots appeared at various places on the body. The ears revealed no evident pathology, and the eyes and nose were negative. The teeth were deciduous, and many were carious and broken off. There was a sinus from one right upper molar, from which blood continuously oozed. Blood was oozing from the socket of a recently extracted tooth, and from around the carious broken ones. The throat was generally congested. Thorax: There was no evident pathology revealed in the heart or lungs. Abdomen: Liver and spleen were not palpable. Extremities: On the right thigh, anterior surface, was a large hematoma the result of a recent injection of fibrogen (Merrill). Reflexes: No pathological reflexes.

Stool: 2-22-29 and 2-25-29, negative for occult blood, ova, or parasites.

Urine: 2-22-29, straw, acid, 1010, negative for albumin, sugar, indican, acetone and diacetic acid, microscopic negative.

The treatment of hemorrhage has long been one of interest to the profession and the laity. It is one of the few real emergencies that arise in medicine, and one, which until recent years, has been handled in an unscientific manner.

Briefly, we may lay down the routine used by older clinicians as being:

Rest in bed.

Morphin.

Reassurance.

Ice-cap over the supposed bleeding area, (if concealed) and packing or ligatures, if visible.

As to drugs, ergot, calcium, emetin, and many others were formerly given.

More recently, horse serum was added, and at comparatively recent date, specific

LABORATORY WORK:

BLOOD

	2-21-29	2-24-29	2-26-29	4-1-29	5-12-29
R. B. C.	2,205,000		3,725,000	4,750,000	4,225,000
Hgb.	50%	50%	60%	70%	70%
C. I.	1.1				
W. B. C.	8,500		8,750	7,500	8,250
S. M.	33		23		59
L. M.	9		4		4
N.	58		68		34
E.			5		2
B.					1
Coag. time	1½ min.	1½ min.	1 min.	1 min.	1½ min.
Bleeding time	3½ hrs. plus	1 hr. plus	30 min. plus	3 min.	7 min. plus
Platelets	1000		10,000		67,500

substances which contain in some form one or more of the bodies which circulate in the blood and enter into the actual clotting.

The very latest development in the control of hemorrhage seems to be transfusion, coupled with the above measures. In all these years there has been a rather hazy idea of the actual mechanism by which blood clots; therefore, the control of hemorrhage is still far behind advances made along other lines.

Mills, of Cincinnati, seems to have struck the real keynote, and if his work holds up, there must be a rewriting of blood clotting chapters in our physiologies. His classification of hemorrhages seems to us a very important step forward. It is based upon alterations in the clotting mechanism, due to various causes, which one might well call the etiology of hemorrhage. He classifies as follows:

Group I. Hemorrhages from physical causes.

(a) Accidental trauma.

(b) Congestion and venous rupture.

(c) Arteriosclerosis and hypertension, as in apoplexy.

(d) Surgical bleeding. (We would prefer to say most surgical bleeding).

Group II. Hemorrhages as a feature of other diseases.

(a) Infectious conditions of a chronic or semichronic nature.

(b) Malignant fevers.

(c) Anemias. Pernicious anemia, and rapidly progressive secondary anemias (Our note—even those following causes in Group I.)

(d) Leukemias.

(e) Jaundice, due to accumulation of bile salts in the blood.

(f) Metabolic disturbances. Scurvy and severe malnutrition.

(g) Tumors—particularly carcinoma.

Group III. Hemorrhage in truly hemorrhagic diseases.

(a) Hemophilia.

(b) Purpura of the true thrombopenic type.

(e) Melena neonatorum.

He further suggests that he might add a fourth group to include the physiologic bleeding of menstruation; and we make bold to remind him that this fourth class might well also include hemorrhage due to the apparently normal lengthening of the bleeding time of the newly born, between the third and eighth days, as is commonly seen after too early circumcision.

Purpura hemorrhagica vera is classed in Group III, as a truly hemorrhagic disease, and should in no way be confused with one of the hemorrhages belonging to Group II, and having as a symptom, purpuric eruptions. Being also, very likely an allergy, the therapy is further complicated by the discomfort of using the substances derived from foreign serums, so commonly relied upon in the control of hemorrahages of other types, and which are so useless here.

In order to arrive at a rational therapy for the disease, it would be well could the disturbance in the clotting mechanism be fully understood. But we are at sea in this condition.

According to Howell the plasma contains prothrombin, anti-prothrombin, calcium, and fibrinogen. There may be formed at times, traces of thrombin, (regarded as not present in the blood normally) and there will be slight amounts of thromboplastin or thrombokinase (cephalin), but these are prevented from acting, or are removed by the antisubstances. The first step in clotting is the liberation of cephalin from platelets when these disintegrate (or from leukocytes or tissues.)

(1) Cephalin and antiprothrombin equal an inactive compound. Since the antiprothrombin acted to prevent the union of prothrombin and calcium, the next step is not permitted to occur.

(2) Prothrombin and calcium equal thrombin.

(3) Thrombin and fibrinogen equal fibrin.

In brief, that is about all of Howell's theory. Cephalin comes from platelets, leukocytes, tissue cells. Prothrombin also seems to come from the platelets, as well as being present in the blood plasma, as is obtained (experimentally) by perfusion of red bone marrow where the megacaryocytes which form the platelets are located. Heparin, or the normal antiprothrombin, comes from the liver. Leech extract (hirudin) is an example of an antithrombin which prevents the reaction between thrombin and fibrinogen. Calcium, of course, is in the blood. Oxalate precipitates it; citrate changes it to a non-ionized form. The calcium ions are needed to react with the prothrombin. The source of fibrinogen is from liver, in part at least.

Mills believes there are two modes of blood clotting, one of which, as we understand it, seems to catalyze the other. The tissues, according to him contain a protein-cephalin compound (apparently not simply cephalin) and he calls this compound "tissue fibrinogen" following the terminology introduced by Wooldridge many years ago.

A. (1) Tissue "fibrinogen" (protein-cephalin compound) plus blood fibrinogen plus calcium equals fibrin (plus cephalin plus prothrombin).

He regards the prothrombin in the blood as in loose chemical combination with the blood fibrinogen. Cephalin is freed by the above reaction, so that the second mode of fibrin formation is started.

B. (1) Cephalin plus prothrombin plus calcium equals thrombin. (2) Thrombin plus fibrinogen equals fibrin.

And, he says, for every molecule of fibrin formed in this last reaction, eight molecules of cephalin and eight of prothrombin are liberated, so that the reaction goes faster and faster until the clot is complete. Practically, we do not see that it makes very much difference which theory is followed, although perhaps Howell's theory attaches more importance to the thrombocytes or platelets. Mills says platelets liberate "tissue fibrinogen" and also some free cephalin.

In purpura hemorrhagica, as you know, the platelets are decreased in number. This may be due to destruction of the megakaryocytes from which they are formed, to less activity of the megakaryocytes, or to more rapid destruction of platelets after they are formed. At any rate it is easy to see, either on Howell's or Mills' view, why sufferers from purpura would be bleeders. Platelets are the most

important source of thrombokinase, and probably supply some prothrombin as well. Mills believes the retraction of the clot as it normally occurs, is due to the protein-cephalin compound, or "tissue fibrinogen". Why it should cause retraction is not clear. but if the platelets are lacking, it at least explains the loose clot in purpura. The cause of the petechiac or ecchymoses of the skin is something concerning which we have found nothing, except that it is apparently related in some way to the low platelet count. We suspect that the explanation is yet to be given and may be found in part in the capillary walls. It is apparently not due to lack of thrombokinase, or it would occur in true hemophilia.

That there is another factor absent than tissue fibrinogen is evident, because the administration of tissue (Fibrogen, Merrill) sufficed to control the hemorrhage of our case for less than three hours. To watch the effect of the oral administration of fibrinogen in this case, was very interesting. The bleeding stopped almost as promptly as turning off water from a spigot within a few minutes of the swallowing of the coagulant, and started with almost the same promptness. The hypodermic administration of fibrinogen was followed by such an enormous hematoma, and so much pain to our little sufferer, that we dared not repeat it.

That the failure of clot shrinkage is not due entirely to platelets in this child is evidenced by the results of transfusion and whole blood injection.

Estimating the weight at 20 kilo, and supposing eight per cent of this to be blood, we would have 1,600 cc. Now we gave 110 cc or a total of about 1/15 of the whole by transfusion. In the mother's blood, if we have a normal platelet count of say 400,000 after transfusion the child should have about a 30,000 platelet count, or sufficient to materially aid clotting, which it did, for eight hours only.

But in administering only 8-10 cc intramuscularly, we got no platelets into the blood stream (they being used up in the local clot forming at the point of injection). Still a hemostasis for 20 hours repeatedly resulted. This raises a question as to what actually does happen. Is some substance liberated from the area of injection, which activates clot shrinkage? If so, is the same substance in the whole blood administered by transfusion? If in the blood given by vein, is it exhausted more quickly on account of being administered thus?

It would suggest, in this case, some activating agent, or agents, not platelets, but from disintegration of clot, slowly absorbed from the local area of injection, possibly cephalin and prothrombin.

We of course did not punish this child by the administration of ergot, calcium, and various other drugs, which could only add to her discomfort and would do no possible good.

As our hemoglobin estimation is ever showing an improvement we will delay recourse to a splenectomy until we feel she is fully able to cope with the vicissitudes of so formidable an operation, in spite of our platelet count being very low. However, should she again set up bleeding, we will promptly advise removal of the spleen.

Please understand that our observations are confined to this child alone, and she is not cured at present.

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HYPERTENSION.

In recent years, during our work in preventive medicine, periodic health examinations, and the prolongation of the span of human life, our interest and attention has been repeatedly focused upon the degenerative diseases. Of these disorders those of the cardiovascular apparatus stand out in importance, and chief among them is hypertension. This symptom complex of elevated arterial tension has been extensively studied as to incidence, type, cause and treatment. It is interesting, therefore, to study the conclusions and results of a follow-up study of this disease entity by Blackford, Bowers and Baker.* Their series consist of 401 cases of hypertension from 10,000 general examinations made over a period of from five to twelve years prior to the study. All of these patients included had a systolic pressure of 175 or more. These were subdivided into two large groups, essential hypertension and hypertension associated with other diseases.

It was found that although the 10,000 cases were evenly divided as to male and female, 65 per cent of the cases of hypertension were females. A family history of hypertension was noted in one-third of all the histories.

The follow-up study was successful in 222 patients or 55 per cent of the cases available. Twenty of these died shortly after the first examination and were excluded, leaving 202 cases in the final study. Of these 101 were dead, a mortality of 50 per cent. It is significant to note that the average length of life following examination was 35 months. Also that while 65 per cent of the cases of hypertension were female the mortality in females was only 39 per cent, while in males it was 70 per cent. Cerebral hemorrhage was the commonest cause of death, then heart disease and thirdly, unremia.

The authors cite a few very exceptional instances of patients with excessively high pressure living comfortably for many years. On the other hand there was no tendency toward recovery. It is interesting also to notice that the prognostic value of blood creatinine readings was very disappointing.

*Blackford, J. M.; Bowers, J. M., and Baker, J. W.: Follow-up study of hypertension. J. A. M. A., 94:328-333, 1930.

MEDICAL MOTION PICTURES.

A recent bulletin of the American College of Surgeons announces the availability of a group of educational medical films made under the supervision of their Board on Medical Motion Picture Films by the Eastman Company. The subject of the films are varied in scope, including demonstrations of surgical technic, pathology, physiology and microscopy.

Such an enterprise is to be commended. Certainly properly made motion pictures should be very instructive and interesting, and of value in the education of medical students and practitioners as well.

The films are for sale and may also be rented. The charges are rather nominal. Certainly it seems that medical groups would find it a very good investment in furthering their own amusement and instruction by securing films to be shown at medical meetings. Certainly such an innovation, if possible, would also stimulate attendance and interest.

C. GRENES COLE.

Dr. C. Grenes Cole was inaugurated President of the Orleans Parish Medical Society after being elected unanimously. This indicates very definitely the feeling that the New Orleans profession has for the new president of their organization. It shows how well liked he is and how popular he is with his colleagues. Dr. Cole has been intimately associated with medicine in New Orleans since 1908, when he graduated from the Tulane Medical School. Previous to this he had been an interne at the Charity Hospital for two years, and after graduation was House Surgeon at Hotel Dieu for a year and Assistant House Surgeon at Charity Hospital for five years. He finished his term of service there in 1914. Dr. Cole has been connected with the Charity Hospital in one form or another since leaving the House Staff. In addition to his membership in the Local, State and National Societies of organized medicine, he is a member of the Southern Medical Association and the American College of Surgeons.

The Journal extends its felicitations to Dr. Cole and wishes for him a happy tenure of office.

DALLAS SOUTHERN CLINICAL SOCIETY.

Attention is called to the clinical meeting under the auspices of the Dallas Southern Clinical Society which will be held the week of April 14. The Committee in charge of the meeting has prepared a splendid program, one which will well repay the physician who finds time or makes it, to attend. This clinical gathering will be addressed by men well known throughout the country. In addition to these instructive talks there will be clinics and a considerable number of special motion picture films of a scientific nature will be shown.

HOSPITAL STAFF TRANSACTIONS

FRENCH HOSPITAL STAFF.

The regular meeting of the French Hospital Staff was held on Friday, December 13, 1929, Dr. T. A. Jung presiding. The minutes of the last meeting were read and approved. Those present at the meeting were: Drs. T. A. Jung, M. J. Lyons, E. L. Zander, F. J. Beyt, R. L. Gordon, F. L. Loria, M. Lescale, F. Gallo, E. N. Haller, H. B. Alsobrook, L. L. Cazenavette, P. H. Jones, K. Harvard, G. L. Smith, J. N. Ane, H. F. Ader, F. B. Faget, C. P. Holderith, P. Graffagnino, W. H. Harris, L. M. Thomason, M. O. Mller, G. G. Richard, R. F. Sharp, G. C. Anderson, C. Tardo, D. N. Silverman.

A letter from the American College of Surgeons was read, and a general discussion of this letter followed.

Dr. E. L. Zander gave a brief extract of the deaths occurring during the month of November. The first case brought up for discussion was one where death resulted from lobar pneumonia. The case was reviewed by Drs. W. H. Harris, M. O. Miller and P. H. Jones.

The next case discussed was a death resulting from chronic myocarditis, pyonephrosis, chronic interstitial nephritis, and chronic cystitis. This case was discussed by Dr. R. L. Gordon.

The third case was a death resulting from toxemia of pregnancy, yellow atrophy of the liver, and acute nephritis. This case was discussed by Drs. F. J. Beyt, P. Graffagnino, F. L. Lorio, W. H. Harris.

The specific program for the evening was a report by Dr. P. Graffagnino on the use of sodium amytal to produce anesthesia in surgery and obstetrics. Dr. Graffagnino gave a brief history on the use of sodium amytal and the methods of administering the drug. The salient points of the report were: that though sodium amytal is the best anesthesia of its kind at present; it is far from perfect since the dosage is too large; there is no method of controlling the drug once it has been administered, and it produces restlessness in obstetrics.

The paper was discussed by Drs. H. B. Alsobrook, M. Lescale, F. L. Lorio, W. H. Harris, P. H. Jones, E. L. Zander.

There being no further business, the meeting adjourned.

E. L. ZANDER, M. D.

VICKSBURG SANITARIUM AND CRAWFORD STREET HOSPITAL.

Staff Meeting, February 10, 1930.

Abstract: Pancreatic Cyst — Dr. J. A. K. Birchett, Jr.

Patient: White female, aged 48 years, three children; admitted to hospital December 16, 1929.

Chief Complaint: Pain in pit of stomach six months; nausea and vomiting. In May, 1929, began having indigestion, belching, and pain in back; colicy pain in pit of stomach and down right side of abdomen. Pain not influenced by food. Appetite good. Vomiting during last three months, no blood. Bowels constipated. Lost 74 pounds since February, 1929.

Past History: At 35 years of age complained of indigestion which she has had ever since. Has had three normal children; has not menstruated since she was 41 years of age. Otherwise irrelevant.

Family Histor: No history of tuberculosis or cancer.

Physical Examination: Fat, middle-aged negro female. Temperature, 98° F.; pulse, 104; respiration, 18; blood pressure, 140/80. Oral hygiene fair; tonsils, negative; thyroid, negative; heart, rapid, regular, slight systolic blow at apex. Lung essentially negative. Abdomen very fat and pendulous; pain elicited in epigastric region on pressure and a mass palpated. Mass pulsated with abdominal aorta and was located either in stomach or liver, or possibly in pancreas. Pelvic examination showed nothing of interest, skin negative. Reflexes negative.

Blood: Leukocytes, 6,700; differential leukocyte count, small lymphocytes, 35; large mononuclears, 4; polymorphonuclear neutrophiles, 63. No malaria. Wassermann and Kahn tests negative. Urine, turbid, acid plus, sp. gr., 1.029; large trace of albumin; marked indican; numerous hyaline and finely grandular casts; some blood cells. Gastric contents, total acid, 15; no free hydrochloric acid; chemical blood, positive (1 plus).

Roentgen-ray and fluroscopic study showed constant deformity of stomach, suggestive of carcinoma.

Summary: History of the case with continued loss of weight and pain and other digestive symptoms, gastric analysis, and radiographic studies were suggestive of carcinoma of the stomach. It was decided to explore the abdomen and after several days of pre-operative preparation with daily gastric lavage and daily administration of glucose, the patient was in excellent condition.

Operation: Upper mid-line incision into peritoneal cavity which was completely sealed off by heavy fatty omentum. Omentum was released by breaking dense adhesions to parietal peritoneum; the colon and stomach were then identified and drawn upward out of the wound. There was no mass or growth in the stomach but a large cystic mass, size of grape fruit, was identified below the colon and lying between the leaves of the mesocolon. As the peritoneum was dissected away after cutting through the leaf of the mesentery, the mass was noted to be from the pancreas and to have some tissue incorporated in its wall at its base where it was very thick. Dissection of the cyst was abandoned after encountering prolific blood supply, and as it was not thought to be malignant, simple drainage was done. The fluid was a muddy yellow color. The fistulous tract from the cyst drained freely for several days, but after removal of the tubes, the drainage became less, and when patient was discharged there was only a slight amount. Patient was discharged in good condition on the sixteenth post operative day.

Abstract: Pancreatitis, Acute, Recurrent—Dr. A. Street.

Patient: White female, aged 48 years, admitted December 16, 1929.

Chief Complaint: Acute abdominal pain, duration five days, nausea, vomiting and slight fever. Bowels have been kept open with cathartics. The pain is located in right upper quadrant; no radiation. No jaundice.

Previous History: Patient has had frequent attacks of right upper quadrant abdominal pain, usually coming on shortly after eating. There has been much feeling of distention. A few of these attacks have been severe and with fever, the last one about three months ago. Onset of digestive symptoms was about four years ago.

Past History and Family History: There has been no typhoid, no scarlet fever, no diphtheria and no surgical operations. Menopause occurred recently.

Physical Examination: No important findings except definite tenderness in upper abdomen, more marked on the right. Temperature, 99.8° F.; pulse, 90; respiration, 20. Patient is slightly stout. Does not appear very acutely ill.

Blood count on admission showed leukocytes, 17,000 per cu. mm., with 90 polymorphonuclear neutrophils. Urine examination showed nothing remarkable. Roentgenogram of gall-bladder without dye showed a large soft oval shadow in the gall-bladder region which was considered as the gall-bladder.

Procedure: The patient improved on palliative treatment, temperature and blood count promptly falling to normal. On December 17, cholecystography showed only the same soft shadow which had previously been considered to be the gall-bladder.

On December 18, abdomen was explored through a high right paramedian incision. The appendix showed marked chronic inflammation and was removed. The gall-bladder was enormously dilated, otherwise apparently normal; it contained no calculi. Bile ducts appeared normal. The pancreas showed areas of induration. Diagnosis of pancreatitis was made. Cholecyst-duodenostomy by the suture method was easily done and the wound closed.

Convalescence was uneventful, the wound healing by primary union. Patient was discharged from the hospital on January 11, 1930. Word from her during the past few days states that she has no complaint.

Abstract: Abscess of Lung—Dr. L. J. Clark.

Patient: White male, aged 33 years, married, farmer; admitted to hospital January 15, 1930.

Chief Complaint: Fever and chilly sensations; weakness; sweating; loss of weight (25 pounds in six weeks). Pain in lower right side of chest and right shoulder; slight cough.

Onset six months ago with pain and cramping in back; fever; aching; profuse sweating. Pain in back lasted about two weeks. No urinary symptoms. Later began having what is called rheumatism, involving all joints about the same time. Then developed what was called pleurisy of right side, with cough, painful breathing, excruciating pain on exertion, unable to rest except on right side. This condition lasted about three weeks. Six weeks ago developed a somewhat similar pain on the left side, under rib margin, and aggravated by movement. Fever and chilly sensations have continued at intervals and at present pain is in left lumbar and splenic region. Appetite fair; food does not disagree. Bowels constipated.

Past History: Has had measles, whooping-cough, chicken-pox, pneumonia twelve years ago, influenza in 1918. Has had no rheumatism except during present illness; several attacks of tonsilitis; no accidents; no surgical operation. Drinks alcoholics moderately; has been a large eater, preferring meats. Smokes cigarettes moderately.

Family History: Irrelevant.

Physical Examination: Temperature, 100° F.; pulse, 100; respiration, 18; blood pressure, 100/60. Fairly well developed but poorly nourished; ap-

parently comfortable but ill. Head, not remarkable; complexion somewhat sallow; sclera jaundiced. Neck, not remarkable. Mouth, few good front teeth; other teeth have been removed. Tonsils apparently not diseased. Thorax, heart accelerated, not enlarged; soft systolic mumur at apex. Lungs, some slight apparent lagging on left side; slight dullness lower posterior left; diminished breath sounds lower left; no rales; fremitus diminshed. Abdomen, soft; no masses. Definite tenderness in upper left quadrant; abdomen somewhat sore generally and costo-phrenic region is tender; no distention; spleen palpable. Physical examination otherwise not remarkable.

Blood: Hemoglobin, 62 per cent; erythrocytes, 3,864,000; leukocytes, 19,400; polymorphonuclear neutrophiles, 85; no malaria. Blood Wassermann and Kahn tests negative. Blood culture, no growth in three weeks. Widal test for typhoid and para-typhoid, negative. Agglutination test for undulant fever, positive, titre 1 to 620. Urine, voided specimen, large race of albumin and few fresh red blood cells. Cystoscopic, right and left, not remarkable.

Sputum: Some elastic fibres; some pus; no tubercle bacilli found; numerous gram positive streptococci.

Gastric Contents: Total acidity, 20; no free hydrochloric acid; chemical blood, positive (2 plus); slight trace of lactic acid.

Roentgen-ray: Thorax, left diaphragm higher than right; homogeneous, increased density of left side, marked at base; upper left and hilus somewhat mottled. Genito-urinary tract, negative. Gastric series, stomach somewhat atonic, slightly enlarged duodenal cap.

Procedure: Lower left chest was aspirated and small amount of amber colored fluid was withdrawn. Microscopic examination showed many pus cells, no organisms; cell count, 4,590; differential leukocyte count, small mononuclears, 5; large mononuclears, 52; polymorphonuclears, 43. Culture showed gram positive Staphylococcus albus. On January 19, about 800 cc. of air was let into the left pleural cavity, chiefly for diagnostic purposes. Roentgenogram then showed a partially collapsed lung with the exception of an irregular dense area at the left base apparently adherent to diaphragm. Three days later, patient began expectorating large amounts of purulent, bloody mucoid material with very foul odor, sometimes as much as six ounces at one paroxysms of coughing. On January 20, lower left posterior chest was explored with needle and purulent blood tinged material removed. Microscopic examination of fluid showed numerous gram positive streptococci. Culture showed gram positive Staphylococcus albus and some gram negative bacilli.

On January 30, left thoracetomy as done with resection of a portion of ninth rib beneath angle of scapula. On incision of pleura, there was a very thin layer of lung adherent to it. This was entered bluntly with forceps, exposing a cavity 3½ inches in diameter and containing a slimy chocolate colored foul pus. There were three free gangrenous fragments of lung tissue in the cavity, the largest 5 x 1 inch. Tube drainage was provided.

Temperature has subsided rapidly and patient showed marked improvement. The cough and expectoration have stopped.

Agglutination test for undulant fever on February 11, was negative.

Abstract—Osteomyelitis of the Mandible—Dr. H. H. Johnston.

Patient: Colored male, aged 32 years, laborer, admitted December 24, 1929.

Chief Complaint: Pain and swelling of the right side of lower jaw.

Present Illness: Onset two weeks before admission with severe toothache, third right lower molar. Consulted his dentist and extraction was attempted under local anaesthesia. Tooth was loosened in its socket but not removed and patient was advised to return in four days. Pain was intense following this procedure and swelling of the surrounding soft parts soon appeared. One week later he went to a dentist in another city and a part of the tooth was removed. Pain continued and swelling increased gradually. The following day a purulent discharge appeared at the site of extraction. The swelling gradually involved the entire side of the face and had extended donward into the neck at the time of admission to the hospital.

Past History: Malaria in 1928. Otherwise past health has always been excellent.

Family History: No history of tuberculosis or cancer.

Physical Examination: Temperature 103°F.; Pulse 100; Respiration 20. Patient is robust and well nourished. There is marked swelling over the right side of the mandible, extending over the entire right side of face and producing almost a complete closure of the right eye. It also extends downward over the right side of the neck. There is considerable thickening of the tongue and a purulent discharge is exuding from the socket of the right third lower molar tooth. The breath has a fetid odor. The tonsils are enlarged and inflamed.

Physical examination otherwise reveals nothing remarkable.

Blood: Hemoglobin 77 per cent; leukocytes, 22,000; differential leukocyte count, small lympho-

cytes, 9; large mononuclears, 6; polymorphonuclear neutrophils, 85 with 61 immature forms. Wassermann test, positive (1 plus); Kahn test, positive (2 plus). Urine—Albumin 1/24 of 1 (by weight); rare pus cells; specific gravity, 1.030. Roentgenogram made twelve days after admission showed extensive osteomyelitis of the mandible, right side.

Procedure: Patient was treated palliatively until January 14. At that time swelling became fluctuant and began pointing near the angle of the mandible on the right side. An incision was made under local anaesthesia at point of maximum fluctuation and a large amount of pus was evacuated, stained smears showed some gram negative fusiform bacilli and sprilla and numerous gram positive streptococci. Culture showed gram positive streptococci.

The wound was irrigated daily with warm Dakins solution and discharge and swelling gradually decreased Seven days later another pocket localized in right sub-mental area. This was also incised and irrigated. Since that date discharge and swelling have gradually decreased and fever has subsided. Our next step will be to remove the sequestra after applying a dental splint to prevent fracture or to attain good alignment of teeth should fracture occur.

CHAMBERLAIN-RICE CLINIC.

At the January meeting of the Staff of the Chamberlain-Rice Clinic, Natchez, the following special case reports were presented:

1. Ectopic gestation with tubal abortion, negro woman, aged 24 years, complicated by marked hemorrhage and multiple subperitoneal fibroids. Rupture (abortion) occurred 24 hours prior to admission, with marked shock. Auto-transfusion of blood from peritoneal cavity; supra-vaginal hysterectomy. Uneventful recovery. Dr. Charles T. Chamberlain.

2. Recto-cecal, gangrenous appendix, white, male, aged 45 years. Ill about 20 hours with indefinite pain and some vomiting, but no abdominal tenderness or rigidity; white cell count, 21,000. Appendix removed without rupture. Uneventful convalescence. Dr. Charles T. Chamberlain.

3. Gunshot wound of left hip, colored female. Fracture of coccyx, bullet penetrating to trocanter of right femur, perforating rectum below peritoneal reflection. Probable nerve injuries. Incontinence of feces and retention of urine. Dr. J. C. Rice.

4. Adeno-caricnoma of right ovary, with marked metastases to liver, stomach, intestines and omentum, white, female, aged 45 years. Nullipara. Laparotomy. Eight gallons of sero-sanguinous fluid drained from peritoneal cavity. In spite of extent of metastases, patient appeared to be in fair general condition and symptoms were due almost entirely to amount of fluid present. Dr. Charles T. Chamberlain.

J. G. Logan, M. D., Secretary.

CHARITY HOSPITAL SURGICAL STAFF.

The regular monthly meeting of the staff was held on January 15. The meeting was opened by Dr. H. B. Gessner, who read an interesting short paper on "Postoperative Treatment." Dr. Gessner covered several of the major complications following operations. The matter of transfusion was well covered, and the substitute of acacia and sodium chloride solutions discussed completely. He pointed out that this substitute for blood has been said to be of great benefit, at least until some blood is obtained. He also very thoroughly discussed the persistent vomiting that one sometimes sees following an operation. In addition, the subjects of scanty urination pneumonia and gastro-mesenteric ileus were thoroughly discussed. Dr. C. J. Miller in discussing Dr. Gessner's paper commented on the use of aspirin in the relief of pain postoperatively. Dr. Maes also discussed the paper.

Dr. E. L. King then followed with a discussion of blood transfusion. Many points of interest and of great importance were stressed. The various methods in vogue were reviewed and their applicability discussed. One of the points of concentration was the matter of securing donors in the hospital. It was stated that as a rule this is a problem accompanied with much difficulty. At the conclusion of his talk, Dr. King asked the section to take up the consideration of having a special committee appointed in order to study and report on this problem. Such a committee was appointed with Dr. E. L. King as chairman.

Dr. Hilliard Miller pointed out the great benefits derived in the treatment of septic cases with frequent small whole blood transfusions.

A synopsis of the first death to be discussed was read by Dr. Rives. This was a case of gun shot wound of the abdomen eviscerating six days following operation and dying of general peritonitis.

Dr. Rives briefly discussed the subject of evisceration and this was followed by a general discussion on abdominal gunshot wounds by Dr. E. L. King, Dr. Mattingly, Dr. Snelling and Dr. Maes. Dr. Maes mentioned particularly the time factor concerned in these cases of gunshot wounds of the abdomen. He said that those cases over eight hours old should probably not be operated on. At least this was the rule followed through the war. The reasons given were that hemorrhage kills the greatest percentage of these cases, and therefore if they are not dead within eight hours they should be left alone, as adhesions formed by nature will very probably take care of whatever damage has been done.

Dr. W. A. Reed presented the synopsis of the next case, which was that of a white male, 27 years of age, who had been operated on several months previously and a number of stones removed from the region of his right kidney. He returned to have this kidney removed. An attempt was made to remove this kidney, but the great difficulties encountered made it necessary to discontinue the operation. The patient subsequently developed a duodenal fistula and died in a short time later. This case was thoroughly discussed by Dr. Gessner, Dr. Reed, Dr. Maes and Dr. Fenner.

Frank L. Loria, M. D.

FRENCH HOSPITAL.

The regular meeting of the Staff was held on Friday, January 10, 1930, Dr. T. A. Jung presiding. The minutes of the last meeting were read and approved, and the report representing the patients discharged during the month of December 1929 was read. Those present at the meeting were: Drs. R. L. Gordon, J. N. Ane, F. Gallo, L. L. Rolling, J. P. Palermo, M. L. Stadiem, H. B. Alsobrook, R. J. Spedale, G. G. Richard, C. L. Cox, P. Graffagnino, L. J. Menville, J. Locascio, E. M. Warner, M. Lescale, D. N. Silvermann, H. F. Ader, E. Socola, R. F. Sharp, M. J. Lyons.

The deaths occurring during the month of December were as follows: Baby A.—A white male child delivered by cesarean section. On extraction, fetal heart sounds were faint and there was some bleeding from the nose. The child died one hour after birth. Primary cause of death was cerebral hemorrhage.

Mrs. D.—A white female, aged 68, was re-admitted to the hospital for carcinoma of the right breast. The patient was dyspneic and showed evidence of pulmonary involvement. Her condition gradually became worse and she died fifteen days after admission. Primary cause of death—Recurrent carcinoma of the breast. Contributory cause—Pulmonary metasasis.

Mrs. B.—A white female, aged 38, was admitted to the hospital for delivery. After a test labor with no progress and no engagement a cesarean section was decided upon. The patient left the table in good condition. The following day, the patient's fever rose to 102°. The patient's condition rapidly became worse and despite all treatment she died four days after delivery. Primary cause of death—Peritonitis. Contributory cause—Circulatory failure, and toxemia.

Baby P.—A white female 2, was admitted to the hospital with a diagnosis of lobar pneumonia. The child's temperature was then 104, her pulse 112, and her respiration 48. The patient's condition became worse and she died two days after admission. Primary cause of death—labor pneumonia Contributory cause—Toxemia, circulatory failure.

Mr. L.—A white male, aged 25, was admitted to the hospital per ambulance with a diagnosis of lobar pneumonia. This patient died nine hours after admission. Primary cause of death—Lobar pneumonia. Contributory cause—Circulatory failure and toxemia.

Mr. P.—A white male, aged 40, was admitted to the hospital with a diagnosis of right sided lobar pneumonia and acute alcoholism. The patient showed signed of improvement for some seven days and then he began to run a hectic temperature. Examination at the rise of the temperature gave indications that the pneumonic process was beginning in another part of the lung. In spite of the hectic temperature, the patient showed signs of improvement and he was preparing to go home when he was overtaken by death. Primary cause of death—Lobar pneumonia. Contributory cause—Coronary thrombosis.

There wa sa general discussion of each of these deaths.

The election of Staff Officers for the year 1930 were as follows: Dr. M. J. Lyons Chairman; Dr. H. B. Alsobrook, Vice Chairman; Dr. E. L. Zander, Secretary-Treasurer; Executive Committee, Drs. W. H. Harris, P. Graffagnino, R. L. Gordon, T. A. Jung. Records and Scientific Program Committee, Dr. M. L. Stadiem, E. L. Zander.

Dr. P. Graffagnino annouiced that the French Hospital Board of Directors was anxious to cooperate with the Staff and to assist the Staff in every possible way.

Dr. H. B. Alsobrook suggested that members of the Staff be notified by letter whenever deaths occurring on their service were to come up for discussion at Staff Meeting.

E. L. Zander, M. D.

TRANSACTIONS OF ORLEANS PARISH MEDICAL SOCIETY

CALENDAR

March 3.—Eye, Ear Nose and Throat Hospital Staff, 8 P. M.

March 7.—Pathological Conference Hotel Dieu, 10-11 A. M.

March 7.—Physiology Seminar, Tulane University, 5 P. M.

March 10.—*ORLEANS PARISH MEDICAL SOCIETY*, 8 P. M.

March 11.—Baptist Hospital Staff, 8 P. M.

March 12.—Touro Infirmary Staff, 8 P. M.

March 14.—Pathological Conference, Hotel Dieu, 10-11 A. M.

March 14.—Physiology Seminar, Tulane University, 5 P. M.

March 14.—Medical Reserve Corps Branch School, 8 P. M.

March 17.—Hotel Dieu Staff, 8 P. M.

March 18.—Charity Hospital, Medical Section, Jung Hotel, 12 Noon.

March 19.—Charity Hospital Surgical Section, 8 P. M.

March 20.—I. C. R. R. Hospital Staff, 12 Noon.

March 20.—Eye, Ear, Nose and Throat Club, 8 P. M.

March 21.—Pathological Conference, Hotel Dieu, 10-11 A. M.

March 21.—Physiology Seminar, Tulane University, 5 P. M.

March 21.—French Hospital Staff, 8 P. M.

March 24.—*ORLEANS PARISH MEDICAL SOCIETY*. Joint Clinical Meeting with the Charity Hospital Staff, 8 P. M.

March 28.—Pathological Conference, Hotel Dieu, 10-11 A. M.

March 28.—Physiology Seminar, Tulane University, 5 P. M.

March 28.—Medical Reserve Corps Branch School, 8 P. M.

SECRETARY'S REPORT.

During the month of February the Society held two meetings. February 10 the Society held its annual joint meeting with the New Orleans Gynecological and Obstetrical Society. Dr. Otto H. Schwarz, Professor of Obstetrics and Gynecology, Washington University School of Medicine, St. Louis was the guest of the evening and presented a very interesting paper on the "Changes in the Blood in Pregnancy and Late Toxemias with Special Reference to Colloid Stability."

At the Meeting held February 24 the following program was presented:

SYMPOSIUM ON UNUSUAL CONDITIONS OF PRESENT INTEREST.

Malta Fever.
By:.....Dr. C. L. Eshleman

A Note on Psittacosis.
By:.....Dr. H. Dickson Bruns

Psittacosis. A Review.
By:.....Dr. Willard R. Wirth

Tularemia.
By:.....Dr. Herbert E. Cannon

Discussed by Drs. W. C. Rucker, C. W. Mattingly, M. Earle Brown, H. E. Bernadas, H. Dickson Bruns, John A. Lanford and Chas. J. Bloom.

These meetings were very well attended.

The President has appointed the following committees for 1930:

JUDICIARY COMMITTEE: Dr. Frank J. Chalaron, Chairman; Drs. S. M. Blackshear, H. B. Gessner, Roy B. Harrison and F. M. Johns.

SCIENTIFIC ESSAYS COMMITTEE: Dr. E. L. King, Chairman; Dr. M. Earle Brown, Dr. Chaille Jamison, Dr. P. A. McIlhenny and Dr. Alton Ochsner.

AUDITING COMMITTEE: Dr. E. H. Walet, Chairman, Dr. G. W. Faivre, Dr. A. V. Friedrichs, Dr. Lucien A. LeDoux and Dr. Sidney K. Simon.

CONDOLENCE COMMITTEE: Dr. W. H. Harris, Chairman; Dr. A. Jacobs, Dr. Allen J. Jumel, Dr. John Smyth and Dr. E. A. Socola.

STATE MEDICINE AND LEGISLATION COMMITTEE: Dr. Paul J. Gelpi, Chairman; Dr. J. A. Danna, Dr. F. F. Gomila, Dr. W. F. Henderson and Dr. Solon G. Wilson.

LIBRARIAN'S REPORT COMMITTEE: Dr. J. A. Lewis, Chairman; Dr. T. E. Clements, Dr. G. A. Cronan, Dr. E. L. Leckert and Dr. J. D. Weis.

PRESIDENT'S REPORT COMMITTEE: Dr. Chaille Jamison, Chairman; Dr. John F. Dicks,

Dr. Homer Dupuy, Dr. C. Jeff Miller, Dr. W. A. Love, Dr. W. D. Phillips and Dr. W. H. Seemann.

SECRETARY'S REPORT COMMITTEE: Dr. E. McC. Connely, Chairman; Dr. O. C. Cassegrain, Dr. C. F. Gelbke, Dr. M. J. Gelpi, Dr. F. J. Hartley, Dr. A. L. Levin and Dr. W. R. Metz.

TREASURER'S REPORT COMMITTEE: Dr. H. W. Kostmayer, Chairman; Dr. C. J. Brown, Dr. J. C. Cole, Dr. J. E. Landry, Dr. M. J. Lyons, Dr. I. M. Gage and Dr. Arthur Vidrine.

HOSPITAL ABUSE COMMITTEE: Dr. A. E. Fossier, Chairman; Dr. H. W. Kostmayer, Dr. M. P. Boebinger, Dr. J. W. Lindner, Dr. P. B. Salatich and Dr. R. H. Potts.

LIBRARY COMMITTEE: Dr. D. N. Silverman, Chairman; Dr. Lucien A. Fortier, Dr. John A. Lanford, Dr. Randolph Lyons and Dr. Leon J. Menville.

PUBLICITY COMMITTEE: Dr. J. H. Musser, Chairman; Dr. Henry Daspit and Dr. P. T. Talbot.

PERIODIC HEALTH EXAMINATIONS: Dr. Leon J. Menville, Chairman; Dr. H. E. Bernadas, Dr. T. J. Dimitry, Dr. F. L. Fenno, Dr. Maud Loeber, Dr. H. R. Unsworth and Dr. M. T. Van Studdiford.

SPECIAL NOTICE.

Bills were sent out to the membership for 1930 dues for both the Orleans Parish and Louisiana State Medical Societies. The members are asked to pay their dues in full, if possible, as this relieves some of the clerical work in the office. The State Society dues which are seven dollars ($7.00) are payable in advance. Medical defense starts only from the day we receive your check. PLEASE GIVE THIS YOUR PROMPT ATTENTION.

The second quarterly premium on group insurance will be due March 5 and amounts to $11.25. The members carrying this insurance are requested to send in their checks at once.

The following doctors were elected to Active Membership: Drs. Amos Graves and Elias Weiner.

TREASURER'S REPORT

Actual Book Balance, Dec. 31, 1929	$1,737.49
Receipts	2,810.08
	$4,547.57
Expenditures	$2,583.83
ACTUAL BOOK BALANCE 1/31/30	$1,963.74

LIBRARIAN'S REPORT

During the first month of 1930, 24 books have been added to the Library. Of these 10 were received from the New Orleans Medical and Surgical Journal and 14 by gift. Two cases of journals have been prepared and sent to the bindery.

A very interesting feature in the work of the Library for the past several months has been the growing use of the collection in connection with particular cases in practice, as well as in the preparation of papers. Calls of this nature are increasing very rapidly, bespeaking the healthy attitude of interest in the Library as a help in everyday practice.

NEW BOOKS

Levine—Coronary Thrombosis. 1929.
Dooley—Intern's Handbook. 1929.
McPheeters—Varicose Veins. 1929.
Rundle—Ker's Infectious Disease. 1929.
Eberts—Surgical Disease of the Thyroid Gland. 1929.
Cherry—Gynecologic Technic. 1929.
White—Stone in the Urinary Tract. 1929.
Elwyn—Edema. 1929.
Friedenwald—Pathology of the Eye. 1929.
Turrell—Principles of Electotherapy. 1929.
Amer. College of Surgeons. Yearbook. 1930.
Newark, N. J. Annual Report Department. 1930.

H. THEODORE SIMON, M. D.
Secretary.

LOUISIANA STATE MEDICAL SOCIETY NEWS

H. Theodore Simon, M. D., Associate Editor.

LOUISIANA STATE MEDICAL SOCIETY MEETING

Shreveport is to be honored with the meeting of the Louisiana State Medical Society this year, and Shreveport as usual will do itself proud in the entertainment and comfort of her guests. Big things are already under way, and when the meeting dates roll around everything will be in apple pie order.

All of the committees are working, and they all report much progress. The scientific exhibits committee have obtained a nice lot of exhibits which will be pleasing and profitable. The entertainment committee has been working overtime and all will be merry when the meeting is held, for a big entertainment in the form of a play will be the feature. Also a big banquet, as per custom, but with trimmings that are too numerous to mention. Golf will be had at our three courses, and a big tournament is being arranged and handsome prizes offered to the champion.

Luncheons will be served at the various local hospitals and clinics are being arranged at the Shreveport Charity Hospitals. These will be announced at the proper time on the bulletin boards. Automobiles will be available at all times during the meeting and for the special occasions.

The hotel committee has secured plenty of accommodations for all, but make your reservation early. Dr. W. S. Kerlin will take care of this for you if you desire.

The ladies will not be neglected, for the Auxiliary is functioning actively and a series of entertainments have been planned. Be sure to bring the ladies because we want them.

The following doctors constitute the chairmen of the various committees:

Dr. J. M. Bodenheimer....General Chairman
Dr. W. S. Perlin.....Hotels
Dr. R. H. Blackman.....Commercial Exhibits
Dr. W. P. Butler.....Scientific Exhibits
Dr. B. C. Garrett.....Transportation
Dr. Frank H. Walke....Publicity
Dr. J. M. Gorton.....Finance
Dr. C. R. Gowen.....Banquet
Dr. C. P. Rutledge.....Lanterns
Dr. A. J. Thomas.....Signs and Decorations
Dr. M. S. Picard.....Registration
Dr. O. C. Rigby.....Badges
Dr. Milton Smith.....Golf
Dr. J. A. Hendrick.....Luncheons
Dr. E. L. Sanderson.....Clinics
Dr. G. A. Caldwell.....Entertainment at Banquet

Be sure and come to this meeting, for Shreveport expects to show you a good time. Remember the date, April 29, 30 and May 1. Place, Shreveport.

REDUCED RAILROAD FARE TO ANNUAL MEETING AT SHREVEPORT.

Your attention is especially called to the special reduced rates provided by the railroads entering Shreveport. Arrangements have thus been made for a one and one-half fare subject to the following requirements:

It is essential that we have one hundred (100) certificates from those registered at the meeting. This may include physicians, their families or their guests. When purchasing tickets to Shreveport for the Annual Meeting ask for the certificate receipt from the Agent, and upon registering at the Annual Meeting deliver this receipt to the Registration Office. These will then be properly validated and returned to you for use in securing return passage to your home. It is the one-half reduction on the return fare that is essential, predicated on your turning in the certificate receipt and having same properly validated. The prompt turning in of these certificates at the Annual Meeting will facilitate the early validating, in order that those who may desire to return at an early date may avail themselves of the opportunity. Your cooperation is therefore essential for the successful operation of this privilege.

From information secured, a considerable amount of the highways are in a state of reconstruction in and around Shreveport, and we feel certain that a large number of the doctors would thus avail themselves of railroad transportation. For further information concerning railroad facilities I would refer you to page 30 of the Advertising Section.

P. T. TALBOT, Sec'y.-Treas.

NEWS AND COMMENT

Vacation escorted tours to Europe for medical co-workers and their friends can be arranged through the Hibernia Bank Travel Bureau of the Hibernia Bank and Trust Company.

Dr. H. W. E. Walther, New Orleans, was guest speaker at the quarterly meeting of the St. Tammany Parish Medical Society, in Mandeville, La., on February 14th past. He spoke on "Urological Problems in General Practice and Suggestions for Their Solution."

Dr. W. R. Fickessen is now connected with the Kerrville Sanatorium as Medical Director and Superintendent.

The Journal is in receipt of the second issue of the "Hebrew Physician." It is contrary to the policy of the Journal to review medical journals, but we would like to comment upon the splendid appearance of this volume, which we presume, (not being able to read the script) is all that it should be in a literary and scientific point of view.

UNITED STATES CIVIL SERVICE EXAMINATION.

The U. S. Civil Service Commission announces the following open competition for nurses:

Chief and Head Nurses (Indian Service); Graduate Nurse (various services); and Graduate Nurse, Visiting Duty and Junior Grade. Information in reference to these examinations may be obtained from the Secretary of the U. S. Civil Service Board of Examiners at the Post Office or Custom House in any city.

The Parish Medical Society met in the East Louisiana State Hospital.

Papers were read by Dr. Lester J. Williams on "The Barium Enema," and Dr. E. M. Toler on "Diagnosis, Prognosis and Treatment of Pulmonary Tuberculosis."

Members present were: Drs. S. Lea, Smith, Wilkins, Miller, Cook, Lorio, Sewell, Hirsch, Morgan, Stanley, Fields, Waltrip, Williams, Fossal and Toler.

Banquet with Drs. Glen J. Smith and Staff.

The next meeting will be in East Louisiana State Hospital April 2, 7:30 P. M.

Glen J. Smith, Pres.; E. M. Toler, Secty.

NEW ORLEANS GASTRO-ENTEROLOGICAL SOCIETY.

The annual meeting of the New Orleans Gastro-Enterological Society was held at the West End Country Club on the night of Jan. 23, 1930. The orator of the occasion was Dr. John H. Musser who presented a thoroughly instructive paper on Cruveilheir's Disease, which was discussed by many of the men present.

After the banquet the following officers were elected:

Dr. Daniel N. Silverman—President.

Dr. Foster M. Johns,—Vice-President.

Dr. Donovan C. Browne—Secretary-Treasurer.

The Eleventh United States Pharmacopeial Convention will be held in Washington, D. C., May 13, 1930.

All eligible organizations and colleges are urged to send for credential blanks. Address Lyman F. Kebler, M. D., 1322 Park Road, N. W., Washington, D. C. Credentials should be filed by March 14, 1930.

A CAMPAIGN TO ANTICIPATE TUBERCULOSIS.

Discover the Early Signs of the Disease In Children.

With comparatively recent studies indicating that in medicine, as in other things, "As the twig is bent so the tree inclines," the National Tuberculosis Association and its affiliated associations throughout the country will make the prevention of tuberculosis among children the keynote of its third annual Early Diagnosis Campaign, to be held during April.

The campaign, one of the many projects made possible by the sale of Christmas seals during December, 1929, will be entirely an educational effort, seeking to impress upon the public the fact

that tuberculosis usually begins in childhood. All literature issued in connection with the campaign—leaflets, pamphlets, posters, etc.—will bear a child's picture and blaze forth the message to parents: "Protect Them From Tuberculosis" together with the specific advice: "Keep them away from sick people," "Insist on plenty of rest," "Train them in health habits," "Consult the doctor regularly."

Two important diagnostic aids are commonly used by doctors to detect the presence of early tuberculosis before it makes itself known by symptoms. One is the well-known x-ray photograph and the second is the tuberculin test. The latter is a simple, harmless, painless skin test which shows whether or not there are tubercle bacilli in the body. The presence of the bacilli is indicated by a reddish tint on the skin at the point the tuberculin was applied.

Contrary to an opinion that still persists in some quarters, tuberculosis is not inherited, but is caused only by a germ called the tubercle bacillus. Although the disease often begins in early childhood it is unlike many so-called "children's diseases" in that it is lasting, or chronic. In most cases it develops so slowly as to appear to be asleep, or "latent" until the early adult years, when it ripens into activity and becomes an object of public concern. One purpose of the educational campaign is to remind people that the preventive measures should be taken during the period of latency.

Some of the common methods by which healthy persons, especially children, are infected by tuberculous persons are well known to the public but frequently are ignored. Kissing or fondling children is often a cause of infection, while drinking cups, spoons and food may have tubercle bacilli on them, unknowingly placed there by someone suffering from the disease Persons having lung tuberculosis, especially those in the more advanced stages, cough and spit out tubercle bacilli, sometimes in large quantities, and children coming in contact with such tuberculous persons are, of course, likely to breathe in or swallow some of the germs.

A positive tuberculin test and tubercle shadows on the x-ray plate are not necessarily a cause for alarm. They do mean, however, that the child has received quantities of tubercle bacilli from someone, and this "someone," who usually proves to be an adult in the home, must be found, for unless this close contact of the child with the tuberculous individual is broken there is grave danger that the child may develop lung tuberculosis. But whether or not the "someone" is found, the child should be under the observation of the doctor until he is fully grown.

Throughout April the many affiliated tuberculosis associations of the United States, under the leadership of the National Tuberculosis Association, will conduct an Early Diagnosis Campaign emphasizing the discovery and prevention of tuberculosis among children.

This effort is one of the activities made possible by the sale of Christmas Seals.

During the entire month of April, 1930, state, county and city tuberculosis and health associations will organize meetings where talks are to be given, motion pictures shown and pamphlets distributed, all emphasizing the importance of watching and guarding the child. The National Tuberculosis Association is preparing several million pieces of printed matter for distribution through its affiliated associations. Posters printed in brilliont colors are being prepared. A motion picture entitled "Consequences" is available. It is expected that several thousand billboards will carry the message of the campaign. A special educational film for parents and teachers is also ready.

There will also be advertisements in magazines and newspapers. The press, ever alert to popular interests, may be counted on to publish articles of information and news telling about the progress of the campaign. In short, effort will be made to bring home to every person in the United States the importance of preventing tuberculosis before it is too late, by discovering it early.

All medical, health, social, civic, religious, labor and fraternal organizations are urged to participate to this movement.

For further details concerning the campaign in Louisiana, address any local association or the Tuberculosis and Public Health Association of Louisiana, 535 St. Charles St., New Orleans, La.

MISSISSIPPI STATE MEDICAL ASSOCIATION NEWS

L. S. Lippincott, M. D., Associate Editor

EAST MISSISSIPPI MEDICAL SOCIETY

The East Mississippi Medical Society, including the counties of Lauderdale, Neshoba, Newton, and Winston, met in regular session at the Elks' Club, Meridian, February 13. The program as furnished by the Secretary, Dr. Lowry Rush, Meridian, was as follows:

1. Prevention and Treatment of Lobar Pneumonia.—Dr. Leonard Hart. Discussion open by Drs. A. L. Majure and W. R. Holladay.

2. Differential Diagnosis of Low Back Pain.—Dr. Leslie V. Rush. Discussion opened by Drs. M. L. Flynt and T. D. Boudreaux.

3. Common Head Colds.—Dr. F. G. Riley. Discussion opened by Drs. Claud Yates and E. L. Robinson.

4. Use of Insulin and Glucose in Abdominal Surgery.—Dr. C. H. Harrison. Discussion opened by Drs. O. F. Parkes and K. T. Klein.

5. Nephritis in Children.—Dr. G. L. Arrington. Discussion opened by Drs. Z. C. Hagan and James Bennett.

The officers of the East Mississippi Medical Society this year are as follows:

President—Dr. H. S. Gully.

Vice-Presidents—From Newton County, Dr. S. A. Majure; from Neshoba County, Dr. Thomas Regan; from Winston County, Dr. O. F. Parkes; from Lauderdale County, Dr. B. L. Robinson.

Delegates to the Mississippi State Association—From Newton County, Dr. M. L. Flynt; from Neshoba County, Dr. W. J. Stribling; from Winston County, Dr. E. L. Richardson; from Lauderdale County, Dr. L. J. L. Hoye.

Board of Censors—From Newton County, Dr. T. E. Jarvis; from Neshoba County, Dr. J. S. Hickman; from Winston County, Dr. T. F. Kilpatrick; from Lauderdale County, Dr. James Bennett.

TATE COUNTY MEDICAL SOCIETY

The following from Dr. J. Sidney Eason, Secretary:

"There has been nothing to happen in Tate of interest whatever as we have not had any meetings. Do not have a hospital in the County and only the usual sickness, and my work as part time health officer to draw news from. I wrote you some time ago giving the more important work as health officer and since that time I have been confined in the hospital at Memphis and at home so much I haven't had time for writing. However, our officers for the Tate County Medical Society for 1930 are:

President, Dr. W. D. Smith, Senatobia; Vice-President, Dr. H. L. Murphy, Arkabutla; Secretary and Treasurer, Dr. J. Sidney Eason, Coldwater; Delegate to the State Medical Association, Dr. H. F. Byers, Senatobia.

We have sent only four patients to the Tuberculosis Sanatorium during the last six months."

THIRTEEN COUNTIES MEDICAL SOCIETY

Dr. W. C. Brewer, Columbus furnishes the following:

The March meeting of the North East Mississippi Thirteen Counties Medical Society will be held in Booneville; the July meeting at Houston and the September meeting at Corinth.

The staff of "The Mississippi Doctor," the official organ of the Northeast Mississippi Medical Society, for 1930 is as follows:

Dr. W. H. Anderson, Booneville, Editor and Manager; Associate Editors, Dr. V. B. Philpot, Houston; Dr. W. C. Brewer, Columbus; Dr. R. B. Caldwell, Baldwyn; Dr. G. S. Bryan, Amory; Dr. W. A. Johns, Corinth; Dr. Carl Feemaster, Jr., Tupelo.

Drs. V. B. Philpot and W. C. Brewer, on the credentials committee from Mississippi, attended the Five States Section Meeting of the College of Surgeons in Atlanta, January 13 to 14.

"Doctors have been busy collecting money to pay taxes. Personally I hate to pay a privilege tax to give my services on many occasions to charity patients."

MISSISSIPPI STATE BOARD OF HEALTH

Dr. T. R. Beech, Ellisville, has recently been appointed health officer of Jones County.

Dr. C. E. Lahmberg, Columbus, has recently been appointed health officer of Lowndes County.

Visitors during January to Mississippi for the purpose of observing health work done were as follows:

Dr. D. L. Cannon, State Board of Health, Montgomery, Alabama; Dr. J. J. Durrett, Chief of Drug Control, Washington, D. C.; Dr. C. A. Bailey,

Representative Rockefeller Foundation, Paris, France; Dr. J. A. Kerr, Representative Rockefeller Foundation, New York, N. Y.; Dr. Charles A. Neal, Director, State Board of Health, Columbus, Ohio; Gilbert F. Dodds, Statistician, Ohio Health Department, Columbus, Ohio; Dr. O. C. Wenger, U. S. Public Health Service, Hot Springs, Arkansas; Dr. Telliaferro Clark, Senior Surgeon, U. S. Public Health Service, Consultant, Julius Rosenwald Fund, Washington, D. C.

RUSH'S INFIRMARY

The program for the Staff Meeting of Rush's Infirmary on February 7, at Meridian, was made up of a Symposium on Influenza, as follows:

1. Etiology and Pathology.—Dr. C. R. Stingily.
2. Clinical Picture and Treatment.—Dr. E. B. Key.
3. Differential Diagnosis.—Dr. I. W. Cooper.
4. Complications.—Dr. W. W. Reynolds.
5. General Discussion, led by Dr. H. S. Gully.

Dr. Julian T. Bailey is President of the Staff and Dr. H. Lowry Rush is Secretary.

SYMPATHY APPRECIATED

In January some of the regular contributors to these columns failed to contribute. The Associate Editor, in a letter to these men this month, mentioned the fact sorrowfully. It was most encouraging and cheering to receive the following:

"C'est tres triste, M. le Docteur. Permit me to sympathize. I've been through all this myself. J. S. Ullman."

MISSISSIPPI HOSPITAL ASSOCIATION

The annual assembly of the Mississippi Hospital Association was held at the Edwards Hotel, Jackson, on February 11. An interesting program occupied the entire day. Among a number of matters important to the hospitals of the State, discussed and considered was a Workmen's Compensation Bill now before the State Legislature. Rev. Wayne Allison, Superintendent of the Baptist Hospital, Jackson, is the new president of the Association. Hamilton Crawford, Hattiesburg, presided over the assembly.

SCIENTIFIC EXHIBIT

A feature of the meeting of the Mississippi State Medical Association this year is to be a scientific exhibit. All hospitals clinics, and individuals are being invited and urged to be represented. Full information may be secured from Dr. E. F. Howard, Vicksburg, chairman of the committee in charge, or from Dr. F. M. Smith, Vicksburg, secretary of the committee.

BIENNIAL REPORT OF STATE BOARD OF HEALTH

Acknowledgment is made of the receipt of a copy of the biennial report of the Mississippi State Board of Health, covering the period July 1, 1927 to June 30, 1929, through the courtesy of Dr. F. J. Underwood, Executive Officer. The report shows a really remarkable advance in health work in the State. At the present time, there are 29 counties with full-time health departments and five or six additional counties have asked for state aid to organize and maintain similar departments. An outstanding feature of development during the period of this report is the extension of local, full-time public health service to ten counties. Any member of the Association will find much worthwhile information in reading this report.

VICKSKBURG SANITARIUM AND CRAWFORD STREET HOSPITAL

The monthly staff meeting was held on February 10. The following special case reports were presented:

(1) Pancreatitis Acute, Recurrent.—Dr. A. Street.

(2) Pancreatic Cyst.—Dr. J. A. K. Birchett, Jr.

(3) Lung Abscess.—Dr. L. J. Clark.

(4) Osteomyelitis of the Mandible.—Dr. H. H. Johnston.

Special Radiographic Studies were presented as follows: Pulmonary Tuberculosis; Lung Abscess; Osteomyelitis of Mandible; Fracture Dislocation of Ankle; Duodenal Ulcer (2 cases); Carcinoma of Stomach.

Visitors at the meeting were Drs. R. H. Foster, Mound, Louisiana; Joseph Green, Richton; F. M. Smith and H. H. Haralson, Vicksburg.

ISSAQUENA-SHARKEY-WARREN COUNTIES MEDICAL SOCIETY

Twenty-one members attended the regular meeting of the Issaquena-Sharkey-Warren Counties Medical Society on February 11.

Dr. M. H. Bell, Vicksburg, discussed the eye and the changes taking place in it from birth to old age. Dr. Bell's interesting presentation was discussed by Drs. E. H. Jones, H. H. Haralson, and S. W. Johnston.

Dr. H. H. Johnston, Vicksburg read a fine paper on Meningococcic Meningitis. This paper was discussed by Drs. F. M. Smith, P. S. Herring, E. H. Jones, W. H. Scudder, D. A. Pettit, L. S. Lippincott. Dr. Johnston closed the discussion.

The Society discussed at length the entertainment of the next Annual Meeting of the Mississippi State Medical Association to be held at Vicksburg

on May 13, 14, and 15. A number of committees made reports on work already begun. Committees for this meeting as appointed by the President, were announced as follows:

General Chairman—Dr. S. W. Johnston, Vicksburg.

Clinics—Dr. P. S. Herring, Vicksburg; Dr. L. J. Clark, Vicksburg; Dr. W. H. Parsons, Vicksburg; Dr. T. W. Huey, Grace; Dr. V. Bonelli, Vicksburg.

Commercial Exhibits—Dr. G. P. Sanderson, Dr. D. A. Pettit, Dr. H. W. Weimar, all of Vicksburg.

Scientific Exhibits—Dr. E. F. Howard, Dr. F. M. Smith, both of Vicksburg, and Dr. M. J. Few, Rolling Fork.

Convention Halls—Dr. M. H. Bell, Vicksburg; Dr. J. B. Benton, Valley Park; Dr. W. H. Cooper, Catchings.

Hotels and Rooms—Dr. W. H. Parsons, Dr. J. A. K. Birchett, Sr., both of Vicksburg; Dr. H, S. Goodman, Cary; Dr. W. C. Seale, Catchings.

Registration—Dr. J. A. K. Birchett, Jr. and Dr. C. J. Edwards, both of Vicksburg.

Reception and Welcome—Dr. H. H. Haralson, Vicksburg; Dr. D. P. Street, Vicksburg; Dr. J. S. Ewing, Vicksburg; Dr. L. E. Martin, Anguilla; Dr. B. T. Orendorf, Rolling Fork; Dr. A. K. Barrier, Rolling Fork; Dr. E. P. Hall, Vicksburg.

Finance—Dr. I. C. Knox, Dr. B. B. Martin, Dr. A. Street, all of Vicksburg; Dr. W. G. Kiger, Eagle Bend; Dr. W. C. Pool, Cary; Dr. W. H. Scudder, Mayersville.

Entertainment—Dr. E. H. Jones, Dr. G. P. Sanderson, Dr. G. M. Street, all of Vicksburg; Dr. E. B. Stribling, Rolling Fork; Dr. G. W. Gaines, Tallulah.

Plans are being made to entertain the State Association in a manner that will be long remembered by every one in attendance.

Dr. R. H. Foster, Mound, Louisiana, was elected to honorary membership in the society.

The Society instructed the Secretary to invite the members of the Fifth District Medical Society of Louisiana o attend the meeting of the State Association as its guests.

Dr. L. J. Clark, Vicksburg, has been elected to fellowship in the American College of Physicians.

Dr. William L. Little and wife, Wesson, attended the meeting of the Southern Medical Association at Miami.

FROM OUR SECRETARY

"To the Mississippi Doctors: I wish to call your attention to the program of the Vicksburg meeting which is now in the hands of the Chairmen of Sections, and must be completed and in the office of the Secretary not later than April first.

"Let me beg of those of you who are to contribute to the program of the State Meeting that you have your essays in the hands of the Chairmen of the Section by the end of March. Also, suggest to the Chairmen the names of two members whom you would like to have open your discussion.

"The following are the Chairmen:

Medicine—G. Y. Gillespie, Jr., Greenwood.

Surgery—H. R. Shands, Jackson.

Hygiene and Public Health—H. R. Hays, Jackson.

Eye, Ear, Nose and Throat—C. A. McWilliams, Gulfport.

Radiology—C. C. Hightower, Hattiesburg.

Respectfully yours,

T. M. DYE, Secretary."

NORTH MISSISSIPPI SIX COUNTY MEDICAL SOCIETY

A meeting of the North Mississippi Six County Medical Society was held at Holly Springs, January 22. Dr. A. H. Little, Oxford, Secretary of the Society, writes, "Even though we rode through a snow storm with the temperature barely above zero, every man on the program was present and we had a good meeting."

Following is the program:

1. Cholecystitis—Dr. R. L. Sanders, Memphis. Discussion opened by Dr. J. C. Culley.

2. A Newer Conception of the Action of Digitalis—Dr. P. W. Rowland, Oxford. Discussion opened by Dr. C. M. Speck.

3. Diseases of the Thyroid Gland—Dr. William C. Chaney, Memphis. Discussion opened by Dr. G. H. Wood.

4. Symptomatology and Treatment of Perforated Gastric Ulcers—Dr. R. D. Kirk, Jr., Tupelo. Discussion opened by Dr. George Brown.

5. Clinical Problems Seen in Children. (Lantern Slide Demonstration)—Dr. Ralph Bowen Memphis. Discussion opened by Dr. H. R. Elliott.

Officers for 1930 were elected as follows: President, Dr. P. W. Rowland, Oxford; Vice-Presidents, Dr. H. P. Boswell, New Albany, Dr. R. G. Grant,

Holly Springs, Dr. G. A. Brown, Water Valley, Dr. F. E. Linder, Oxford; Secretary, Dr. A. H. Little, Oxford.

Dr. A. H. Little, Oxford, furnishes the following notes:

Dr. F. E. Linder, formerly of Memphis, is now located at Oxford doing general practice.

Dr. S. T. Lyles, formerly of Tula, is now located at Oxford doing general practice.

Dr. B. S. Guyton, Oxford, will soon open his new Eye, Ear, Nose and Throat clinic near the Oxford Hospital.

SOME HIGH LIGHTS IN MISSISSIPPI MEDICAL HISTORY (Facts gathered from a History of the Mississippi State Medical Association, published in 1910).

The Aberdeen meeting in 1879 must have been an occasion of sorrow for those who attended. Some twenty members nearly ten per cent. of the total membership, had fallen in the great yellow fever epidemic of 1878 and the first day of the meeting of the Association was set apart for memorial exercises. Music for the occasion was furnished by the Aberdeen Harmony Club, there was a prayer by Bishop Paine, a lesson read from the Scripture by Rev. V. W. Shields, a memorial address by Rev. B. M. Palmer, of New Orleans, memorial poems by Dr. J. Dickson Bruns, of New Orleans and Major S. A. Jonas, of Aberdeen, a memorial oration by Dr. John Brownrigg, of Columbus, the report of the committee on necrology by Dr. A. G. Smythe, of Baldwyn and special tributes to diseased members by various of their fellows, the exercises concluding with benediction by Rev. John H. Scruggs.

The Congress of the United States was invoked in behalf of a more efficient quarantine system and an application was made to the Legislature of the state for an Act incorporating the Association.

Dr. Charles T. Chamberlain, Natchez, attended the sectional meeting of the American College of Surgeons at Atlanta in January.

ANDERSON INFIRMARY.

The regular monthly staff meeting of the Anderson Infirmary, Meridian, was held on February 14. The following special case reports and papers were presented:

1. Toxin-antitoxin. Dr. Googe.
2. Perforated Gastric Ulcer . Dr. Anderson.
3. Broncho-Pneumonia. Dr. Arrington.
4. Fractured Skull. Dr. Anderson.
5. Toxemia of Pregnancy. Dr. Cleveland.

Dr. Anderson made a report of the recent meeting of the Mississippi Hospital Association at Jackson.

Dr. H. F. Tatum is president of the staff.

POLIOMYELITIS—Riley makes a plea to the medical profession in general and to health officials in particular for the early diagnosis, hospitalization, early serum treatment, and after-care of poliomyelitis. Diagnosis before paralysis is important. When a patient, especially a child, appears prostrated out of proportion to the temperature, with flushed face, an anxious expression, mild injection of the throat, rapid pulse, a coarse tremor or movement, the head tilted on the the neck, stiffness of the spine and pain on anterior flexion, and an increase in the cellular and globulin contents of the spinal fluid, a diagnosis of poliomyelitis should be made and convalescent serum administered. No untoward results from the use of convalescent serum need be feared, and if there is an error in diagnosis it should be on the side of safety. Early and repeated spinal drainage and the use of convalescent serum are most important in the preparalytic stage of the disease. When it is realized that the pathologic changes of this disease are located in the central nervous system, it is obvious that, to insure the minimum of paralysis and to obtain the greatest functional activity of the part, prolonged rest in the recumbent position is essential. The number of patients with poliomyelitis recovering without appreciable paralysis during 1928 epidemic in Maryland and in late epidemics elsewhere is most gratifying and encouraging. The treatment of this disease under proper conditions, and in the hands of competent persons, reveals that between 70 and 80 per cent of the cases show good recovery as compared with 20 per cent receiving less intensive treatment. Finally, it may be stated that, under appropriate treatment, 90 per cent of the deformities which have followed in the wake of past epidemics may now be eliminated, and deformities as an after-result of this disease should entirely disappear. Riley stresses the fact that early treatment in this disease of all diseases is an absolute necessity. With the use of human serum, early hospitalization and the services of an orthopedic surgeon during the whole course of the disease, a low mortality rate, a very low average of total paralysis, a striking reduction in paralysis of the severe grade and complete prevention of deformities are to be expected.—J. A. M. A., 94:550, 1930.

BOOK REVIEWS

The Nutrition of Healthy and Sick Infants and Children: By E. Nobel, C. Pirquet, and R. Wagner. 2d rev. ed. Translation by Benjamin M. Gasul, B. S., M. D. Philadelphia, F. A. Davis Company. 1929. pp. 243.

In order to utilize to a maximum degree the available food supply for infants and young children in the central powers, during the World War the late Clemens von Pirquet introduced a new unit of nutrition which he believed had advantages over the calorie. To this unit he gave the name "nem" (Nutrition—Equivalent—Milk). He considered that the substance which furnishes a theoretical basis for the unit of fuel value is human milk, the oxidation of one gram of which results in an energy production of 0.67 calories. The relation, therefore, between "nem" and calorie is 2 to 3. This book, which is a translation of the German book, outlines the practical application of Professor Pirquet's nem system of feeding.

In addition there is a clinical consideration of nutritional disturbances in infants and young children. The classification of these disturbances follow very closely those of Finklestein and Czerny and Kellar in that they consider that most of these intestinal conditions are based on errors in nutrition and respond to rational dietary management. The nutrition of the normal infant and child is fully discussed in the first part of the book. Then the management of the sick infant and child is taken up. Complete graphic charts which follow the conventional schematic style prevailing in most of the clinics and hospitals of Germany and Austria, constitute many of the illustrations. In addition there are many photographs which amplify the text. Towards the end of the book certain disease conditions closely allied to nutrition are discussed.

The entire work presents the personal experiences of the authors at the University Children's Hospital in Vienna and outlines in a very comprehensive way the management of nutritional diseases with the typical thoroughness which is characteristic of German clinicians.

Many American pediatrists continue to regard their nutritional disturbances in infants in terms of the German classifications although considerable change of opinion has taken place in the past ten years. It is believed that this book will be well received for the reason that it offers a means to those, who are unfamiliar with the German point of view concerning the feeding of infants and the management of gastro-intestinal disturbances, to broaden their knowledge.

ROBERT A. STRONG, M. D.

Principles of Clinical Pathology in Practice: By Geoffrey Bourne, M. D. (Lond.), M. R. C. P., and Kenneth Stone, M. D. (Oxon.), M. R. C. P. Lond., Oxford Univ. Press. 1929. pp. 392.

This compact little volume is unique in its subject matter and in the manner in which the latter is handled. The authors have attempted very successfully to cover the whole field of laboratory diagnosis and interpretation in a general way. Little or no detailed technic is given, but adequate mention is made of the procedures to be taken, and the meaning thereof in most of the important disease conditions one meets with. The book is divided under headings of the disease and of the different organ systems. The physician is told what laboratory examinations to have made, what results to expect and what value to attach to them. This volume should be of considerable service to those clinicians who do little or none of their own laboratory work but who wish to keep abreast of laboratory procedure.

S. J. LEWIS, M. D.

The Blood Picture and Its Clinical Significance (Including Tropical Diseases): A Guidebook on the Microscopy of Blood: By Prof. Dr. Victor Schilling. Tr. and ed. by R. B. Gradwohl, M. D. 7th and 8th ed. rev. St. Louis, C. V. Mobsy. 1929. pp. 408.

This volume is an excellent translation of Prof. Schilling's work (7th and 8th ed.), by Dr. Gradwohl. The book is divided into four parts,—Technic, Theory, Morphology and Discussion of the Blood Picture, Fundamental Principles for clinical use of the blood picture. Selected examples for practical use of hemograms are given. The author lays greatest emphasis on his hemograms and their interpretation, these constituting the raison d'etre of the book.

There has been a long controversy between Schilling and Arneth as to the meaning of the qualitative and quantitative changes in the leukocytes of the blood in various disease conditions. This volume, besides being a work on blood per se, is an attempted refutation of the several

volumes of Arneth. The main point of interest to the author is the change in neutrophiles.

Schilling classifies neutrophiles into myeloblasts, promyelocytes, myelocytes, juvenile cells, stabs and segmented cells,—as against Arneth's classification with its five main divisions, each having 18 to 24 subdivisions. In brief, Schilling professes to see a great number and variety of quantitative and mainly qualitative changes in the granulocytes and non-granulocytes of the blood. He speaks of "shifts" to the left and right, as does Arneth; also, "degenerative" and "regenerative" types of cells of different stages of matureness. The attempt is made to diagose and prognose disease processes on these minute structural changes. It is perfectly true that one can distinguish one type of tissue reaction from another very often, a good example being a benign versus a malignent cell or growth. Also, every mircoscopist has noted certain qualitative cellular changes in various conditions, *e. g.*, the monocyte-lymphocyte ration and nuclear shift in tuberculosis, or the types of neutrophiles seen in lobar pneumonia or any acute severe process; but few of us have applied or will apply ourselves so closely to cellular changes as Prof. Schilling has done. Even Prof. Schilling must have a very difficult task to diagnose diseases from blood smears alone when the diagnosis depends on "nuclear shifts," etc. At the same time most microscopists do or will employ in the future, consciously or subconsciously some simplified Schilling index method to denote qualitative leukocyte changes.

This work by Prof. Schilling, together with the works of Sabin, Soames and Cunningham, in the field of supra-vital staining, is certain to be a vast stimulus toward more exact and informative blood examinations.

S. J. Lewis, M. D.

Practical Materia Medica: By Clayton S. Smith, Ph. D., M. D., and Helen L. Wikoff, Ph. D. Philadelphia, Lea & Febiger. 1929. pp. 300.

A real well-worth-while presentation of a subject, the teaching of which there may be some grounds for argument. It has always seemed to the reviewer better pedagogically to teach the student thoroughly a few drugs than to attempt to acquaint him with several hundred. Be that as it may, if the latter method of teaching is considered the best, then this relatively small book will be of extreme value in instructing the prospective doctor.

J. H. Musser, M. D.

Annual Report of the Rockefeller Foundation for 1928: New York, The Rockefeller Foundation. pp. 460.

A survey of the tremendous amount of work done by the Rockefeller Fundation in the past year. There are probably very few physicians who have even the suggestion of an idea as to how extensive, how far reaching and how broad are the ramifications of the work of this magnificent and active organization. A glance through this annual report will be most elucidating and instructive.

J. H. Musser, M. D.

International Clinics: Vol. III, 39th Series, September, 1929. Lippincott Co. pp. 302.

This volume of the International Clinics is excellent, contained interesting and practical articles by prominent national and international authors. Of particular interest to the internist are the articles on Spastic Colon and Treatment of Anemia.

Willard R. Wirth, M. D.

Le cardiogramme de decubitus lateral gauche en clinique: By V. Pachon and Roger Fabre. Paris, Gaston Donn et Cie. 1929. pp. 87.

The authors prove that Professor Pachon has demonstrated the absolute homology between the normal cardiogram of the left laterial decubitus and the physiologic tracings of intracardiac pressure. They describe each of the different phases of the cardiac revolution, from the first incident of auricular contraction up to the bed of the cardoigram with its undulating and slightly obliquely descending direction as far as the beginning of ventricular diastole and down to the lowest point of the cardiagram which point corresponds to the opening of the auriculo-ventricular valves. Then follows the slightly ascending tracing of the general diastole of the heart to the starting point completing the cycle.

All the different incidents of the cardiogram are considered singly: the auricular systole; the intersystole; the beginning of ventricular tension and opening the segmoids; the bed of the cardiogram, the height and direction of which indicate the sustained effort of ventricular expulsion; ventricular decontraction and closure of the segmoids; opening of the auriculo-ventrticular valves; the general diastole of the heart; and the anomalies engaging each of these incidents are the object of analytic and etiologic study.

Henry Bayon, M. D.

Principles and Practice of Minor Surgery: By Edward Milton Foote, A. M., M. D., and Edward Meakin Livingston, B. Sc., M. D. New York, D. Appleton & Co. 1929. pp. 787.

The present edition presents the subject under three heads—namely, surgical technic, principles of diagnosis and treatment, and localized surgical treatment. The first two parts, being entirely new, give the modern conception of disease as well as the corresponding and standard technic of treatment. The chapters dealing with the surgical affections of the various parts of the body also have been entirely revised, thereby, bringing to the reader new suggestions in diagnosis and treatment.

The entire book is profusely illustrated with unusually good engravings made chiefly from photographs and original drawings, showing actually what is, rather than what might be as medical illustrations often do.

The text is also systematic, logical and to the point, many lengthy and unnecessary details having been condensed to a few paragraphs.

This volume, even more than its many previous editions, should continue to be useful both as a text for students and as a reference book for the general practitioner and the younger surgeons.

PAUL G. LACROIX, M. D.

Diagnostic Methods and Interpretations in Internal Medicine: By Samuel A. Lowenberg, M. D., F. A. C. P. Philadelphia, F. A. Davis Co. 1929. pp. 1032.

This is a good, handy reference volume devoted to diagnostic methods and interpretations in medical diagnosis. The normal findings with pathological variations are noted. Special chapters are devoted to laboratory findings, the electrocardiograph, the radiograph and special examinations dealing with life insurance, periodic health examinations and malingering. It is a worthwhile addition to a medical library.

I. L. ROBBINS, M. D.

Textbook of Clinical Neurology: For Students and Practitioners: By M. Neustaedter, M. D., Ph. D.; with an Introduction by Edward D. Fisher, M. D. Philadelphia, F. A. Davis Co. 1929. pp. 602.

A comprehensive volume, well written by one well known in the fields of neuropsychiatry; easily readable with illustrations, clear cut and readily interpreted. The unique feature, though an essential one, of this volume is that the author has grouped in paragraphs, rather than chapters, the necessary abstracted material that the busy doctor requires when referring to reading that is collateral. The abstracts are concrete in composition and conclusions. His method of approach to examinations is just what the alert practitioner is in need of.

The part dealing with functional neuroses, while not elaborately and flambouyantly portrayed as has been done by other authors, is nevertheless placed before us in a manner which at a glance one can gather the information desired. Perforce, this should be so as this book deals in its entirety with neurological data.

A foreword by Edward Fisher, M. D., is a compliment to the author. This volume is the *tole et lege* type of book companion to those interested in this special subject and likewise should be an aid to the general practitioner.

WALTER J. OTIS, M. D.

The Physiology of Love: By George M. Katsainos, Ph. D., M. D. Boston, Privately printed. 1929. pp. 326.

This treatise has nothing in particular to justify its being in existence. Keeping in mind that there is a little good in anything bad, one will be charitable. The author is an authority on his subject, as he takes no little trouble to emphasize in his book.

I. L. ROBBINS, M. D.

Varicose Veins: By H. O. McPheeters, M. D., F. A. C. S. Philadelphia, F. A. Davis Co. 1929. pp. 208.

An excellent book devoted to every phrase of varicose viens.

Every detail concerning the indications and the treatment of this condition is well presented. Any person doing this type of work is urged to read this book. Likewise we urge the reading by individuals who entertain any "doubts" as to the rational of this treatment.

The author has had an extensive experience and presents it in such a form as to make it easy reading.

SHIRLEY C. LYONS, M. D.

The Cytoarchitectonics of the Human Cerebral Cortex: By Constantin von Economo. Translated from the German by Dr. S. Parker. London, Oxford University Press. 1929. pp. xii+186, 61 figures.

This work provides a survey of the histological organization of the cerebral cortex, each region being systematically described and mapped with respect to the brain surface, as well as illustrated by excellent photographs and drawings. As is

well known, the three distinctive varieties of cortical neurones (pyramidal, granule and fusiform cells) have their cell bodies arranged in horizontal layers within the cortex. The six layers thus defined present regional variations, and on the basis of these variations von Economo defines five general types of cortical organization. Variations within the provinces of the five types allow the further differentiation of over one hundred histologically distinct areas. Structure is correlated with function insofar as possible, and the usefulness of such data in relation to disturbed cortical function is emphasized.

The author published in 1925 an extensive treatise on the subject; while the present small volume does not exhaust the details of this complex field, it makes available in English a reference superseding the similar studies by Broadmann (1909) and by Campbell (1905).

HAROLD CUMMINS, Ph. D.

Synopsis of the Practice of Preventive Medicine as Applied in the Basic Medical Science and Clinical Instruction at the Harvard Medical School: Cambridge, Harvard Univ. Press. 1929. pp. 194.

It has been a genuine pleasure to read this book, true to its title, with every chapter giving practical discussions as brief as consistent. In its condensed form it is unsurpassed for excellence and convenience.

This book should appeal strongly to the students of medicine, the general practitioner and the public health worker.

OSCAR DOWLING, M. D.

Ker's Infectious Diseases: Revised by Claude Rundel, O. B. E., M. D. (Lond.), M. R. C. S. (Eng.), L. R. C. P. (Lond.), D. P. H. 3rd Ed. London, Oxford University Press. pp. 594.

The original volume by Ker was written to be used as a text-book and was published at a time when the physician had to rely more completely on the physical findings in a given disease than at present. The author gave intricate descriptions of the acute exanthemata as he had observed them in his very wide experience. For the present edition Kundel, with little changes in the general description, has attempted to bring bacteriology, immunology, and treatment up-to-date.

The evaluation of the author of the newer methods of treatment are indicated by the following expressions of opinion: Very favorable comment is made on the use of scarlet fever serum as a curative measure though it is not recommended to be used in the late septic complications. The production of both active and passive immunity is considered and the accepted methods given. It is pointed out that measles is one of the most serious of childhood diseases, not because of its immediate mortality, but due to the complications, and isolation has not met with the same success in this disease as in other analagous diseases. This is attributed to its great infectivity prior to the time when the disease can be easily diagnosed. The use of convalescent serum in 5 to 10 cc. doses, producing an immunity of from three to four weeks' duration, is considered of value in time of epidemic. No value is attached to the use of antistrepticoccus serum in erysipelas, on the contrary it is believed to make the general symptoms worse in some instances. It is interesting to note that the author places little value in the time honored custom of disinfection of the sick room following an infectious disease. A review of the customary methods employed is given but practically none are recommended.

As a reference book the publication has considerable value, but to read it entirely would be a burdensome task. Its length is accounted for by its completeness.

J. C. BARTON, M. D.

Supplement to the George Blumer Edition of Billings-Forcheimer's Therapeusis of Internal Diseases. New York, D. Appleton & Co. 1929. pp. 760.

A most interesting volume and one that brings the subject up-to-date in a most satisfactory manner by authors well established in their particular fields. A welcome addition to this system of therapeusis.

I. L. ROBBINS, M. D.

Edema and Its Treatment: By Herman Elwyn, M. D. New York, The Macmillian Co. 1929. pp. 160.

This book does not represent original experimental work by the author but rather a lengthy review of the publications of others with the formation of his own ideas as to their meaning. In it there are 193 references to the literature. That some of the experimental work apparently results in conflicting conclusions is granted by Elwyn, who has accepted only that most accurately done.

The author shows that most observers have proven that the blood volume remains within normal limits in all conditions with edema and concludes that edema is due entirely to a slowing up of the movement of fluid from the tissues to the blood stream. The factors involved in water movement are the water depots, capillaries, kidneys and a regulatng center in the interbrain. The latter is only partially proven to exist. It

is assumed that the constellation of electrolytes in the tissues or depots determines the amount of water they contain and this constellation is changing with any alteration in function of any other of the three factors. That is the usual attempts to explain edema formation on a purely physical and chemical basis are failures is his belief and he attempts to prove it is a vegetative function with its center of control in the phylogenetically oldest part of the interbrain.

Under treatment of edema, it is considered as to origin, whether cardiac, renal, that of disturbed metabolism or unknown cause. The judicious limitation of fluids is stressed as is the use of drugs in selected cases. The drugs considered are those of the purine group, mercury compounds and acid forming salts. In each case an attempt is made to explain this mode of action with a scientific explanation for it.

Though a part of the book entails a greater knowledge of chemistry for its comprehension than the average reader may have at his command, the majority of it is decidedly enlightening. Undoubtedly it represents a thoughtful contribution to our conception of the nature of edema regardless of the system at fault.

J. C. BARTON, M. D.

The Right Honorable Sir Thomas Clifford Allbutt: A Memoir: By Sir Humphry Davy Rolleston, Bart. G. C. V. O., K. C. B. London, MacMillan & Co., Ltd. pp. 314.

It is particularly appropriate that the present Regius Professor of Physic of the University of Cambridge, Sir Humphry Rolleston, should have written the life of his predecessor, Sir Thomas Clifford Allbutt, who had held the chair for thirty-two years. Sir Humphry has handled his subject with a delicacy of touch and with a charm which makes the work one a very great pleasure to read. He has been handicapped somewhat by failure to secure letters, writings and other biographical memoranda of the early life of Sir Clifford. This is not, however, a real misfortune as it is in the later years of life that the thoughts and ideas of early life come to full bloom; it is, needless to state, truly the most important part of a man's life unless senile decay has set in, which it did not in the case of Allbutt.

Sir Clifford was a great man, a great physician, a scholar and observer, a humanist, and a beloved and attractive gentleman. He, early in his life by his conscientious studies of disease, had made contributions to medical science which have been overlooked by present day writers. Even such an important observation as the value of a hypodermic injection of morphin for the relief of the dyspnea of heart disease, was made by Allbutt in his early years of life, and yet this fact is known by few of us of the present generation. Probably the greatest contribution that Sir Allbutt made to medicine was his outstanding work on diseases of the arteries, including angina pectoris. His theory of the mechanism of the production of angina pectoris is still considered logical. His important conclusions that high blood pressure antidates and precedes arterial diseases, are to this day, although advocated some thirty-five years ago, adequately maintained by experimental work. It was largely through Sir Clifford that the estimation of arterial blood pressure has become a routine procedure. One of the particularly interesting features of the life of Allbutt lies in the interest that he always took in the scholarly presentation of medical subjects. He fought vigorously and actively against the use of slovenly language in medical writings. Punctilious in his duties, fastidious in his dress, so was he always precise to the last degree in his use of English language in his medical writings.

The 89 years of the life of this distinguished physician were broad in their diversity of interests and spacious in their outlook on life. They were years which were always energetically passed and teemed with physical and cerebral activities because he abhorred laziness. It is impossible to touch in a short review such as this upon the broadmindedness of the man and the catholocity of his interests. A friend of all men and loved by all, it was a happy ending to a splendid life to have passed away quickly and promptly, so rapidly in fact that his professional adviser did not have time to reach him, when taken ill one night, before death ensued.

Sir Humphry is to be congratulated upon this splendid biography written, as we in America have come to expect the English physician to write, with discrimination, taste and beautifully molded English. The pleasure of reading about Allbutt, anticipated upon opening the volume, was more than realized as result of the scholarly efforts of the author.

J. H. MUSSER, M. D.

Surgical and Medical Gynecologic Technic: By Thomas H. Cherry, M. D., F. A. C. S. Philadelphia, F. A. Davis Co. 1929. pp. 678.

This is a practical text of operative gynecologic technic, from the simplest to the most complicated operations, very clearly illustrated and described with great simplicity. Though the text is intended for what the title means it to be, the author gives valuable hints as to indications and diagnosis. Several chapters devoted to anesthesia and anesthetic methods, as well as the various physical methods of therapy, will be a great help to practitioners for quick reference.

ADOLPH JACOBS, M. D.

Stone in the Urinary Trace: By H. P. Winsbury White, M. B., Ch. B. (Edin.), F. R. C. S. (Edin.), F. R. C. S. (Eng.). Philadelphia, P. Blakiston's Sons & Co. 1929. pp. 344.

The recently published volume entitled "Stone in the Urinary Tract," by H. P. Winsbury White, of England, is in my opinion, if not the best, certainly one of the best books written on the subject in many years.

The problem of urinary calculus has been thoroughly considered from every possible angle and has been so put into words that it is both instructive and interesting reading. Fortunately there are just enough statistics incorporated in it to put over the point at hand without becoming boring and tiresome. Furthermore the subject is so written as to be equally valuable to the general practitioner of medicine as well as the urological surgeon, to the later of whom I consider it to be almost indispensible.

W. A. Reed, M. D.

Interns Handbook: By Members of the Faculty of the College of Medicine Syracuse University. Philadelphia, J. B. Lippincott Co. 1929. pp. 254.

A handy book, but hardly of such great worth or value as to require a list of authors totaling close to sixty persons. It contains a smattering of information that may be of interest to any one engaged in a general internship.

I. L. Robbins, M. D.

Coronary Thrombosis: Its Various Clinical Features: By Samuel A. Levine. Baltimore, Williams & Wilkins Co. 1929. pp. 178.

An excellent monograph that rather exhaustively covers a most important subject. An interesting feature is the last division of the book, giving a summary of 145 case reports. There is an excellent list of references to the literature. The author is an authority who presents his subject in a most interesting manner and merits the attention of both internist and surgeon.

I. L. Robbins, M. D.

Pathology of the Eye: By Jonas S. Friendenwald, A. M., M. D., F. A. C. S. New York, The Macmillan Co. 1929. pp. 346.

American ophthalmology is indebted to the author for its first book on this subject. The practicability, readability, numerous and excellent illustrations, and moderate price commend it highly. The prohibitive prices charged by German publishers for similar works should be an incentive for its introduction in foreign countries.

Being essentially written for the beginner in ophthalmology, the author has apparently intentionally presented the subject in a rather orthodox manner. More recent conceptions, such as the multiple causation of phlyctenular and herpetiform corneal affections are omitted, as is any mention of the life cycle of the ocular cells and the toxicity of the ocular fluids on which most diseases of the eye must really depend.

Rather surprising is the author's apparent unwillingness to acknowledge that toxic substances, without bacteria, can produce inflammation, especially in the uveal tract. It is true that the specific chemicals involved have not been definitely isolated but neither have many others on which our misunderstanding of pathology and treatment almost solely depends.

The work of numerous investigators, including Irons and Brown, should convince the most skeptical that the recurrence of non-specific uveal disease is best prevented by the eradication of the causitive toxic focus. This causitive factor must be either a physical or chemical agent, assuming that the cells of the tissue involved have a normal life cycle.

Like most first editions, this volume contains certain phrases which will doubtless be rearranged in subsequent editions.

The material is well arranged, the index comprehensive and the illustrations are worthy of especial mention.

Anyone who loves ophthalmology will make no mistake in reading this volume.

Chas. A. Bahn, M. D.

The Principles of Electrotherapy and Their Practical Application: By W. J. Turrell, D. M. R. & E. (Cantab.), M. A., D. M., B. Ch. (Oxon.). Second edition. London, Oxford Univ. Press. 1929. pp. 413.

In the first chapter the author goes far back into the history of this subject. The people bordering the Mediterranean used the torpedo fish which was really capable of producing electrical shocks, and was utilized medically. In 300 B. C. electricity was produced by friction upon precious stones. A marked advance was made when the Leyden jar was discovered in 1745. Pains and paralysis were the main indications for treatments, at this time. Kratzenstein advanced this subject greatly, and was called the Father of Electrotherapy. In England the clerical professions were the early electrotherapists, and all forms of diseases were treated. The prominent names of the early therapists were Galvani, Volta, Dr. Bird, Farrady, Duchene, etc.

Chapters on actions of electrical currents are very good, and include constant current, low and high frequency, diathermia, both surgical and medical, and static electricity.

Chapters on radiant energy consider heat and light, ultra violet, and roentgen-rays. A most instructive chapter on electrical shocks is given.

The book is a very good one in which careful attention is given to details of treatments. Any practicing physician and specialist will be well repaid for the use of this book for both reference and study.

L. A. FORTIER, M. D.

Annals of Roentgenology—The Neck: By Percy D. Hay, Jr., M. D., with an Introduction by Henry Pancoast, M. D. Illus. New York, Paul B. Hoeber, Inc. 1930. pp. 104.

Dr. Hay's book will be found of great interest by the roentgenologist, orthopedic surgeon and students. The author has wisely elaborated on the normal neck. This is very important, as the normal often varies within itself. In addition to the description of the normal appearance of the structures of the neck, are beautiful illustrations. The abnormal neck is next presented and every possible condition in which the roentgen-ray can be of use is discussed in full. Various positions are mentioned and described that will facilitate the roentgen-ray examination of the neck. Many clear and interesting illustrations are found in discussing the pathology of this region. The book contains 66 illustrations, four chapters, a bibliography and a most interesting introduction.

LEON J. MENVILLE, M. D.

The Practical Medicine Series: General Medicine: Series 1929. Ed. by G. H. Weaver and others. Chic. Yr. Bk. Pub. 1929. pp. 829.

The 1929 General Medicine Series is quite up to the mark of its predecessors. In this volume will be found abstracts of the best papers on infectious diseases, diseases of the chest, diseases of the blood, and blood making organs, diseases of the heart and blood vessels, diseases of the gastro-intestinal tract and finally, diseases of metabolism. In this volume the same good judgment will be noted in the selection of certain valuable papers for lengthy abstraction. The interpolation of notes and addenda by the collaborators gives additional interest to the subject matter. The volume can be highly recommended to the practitioner who wishes to keep abreast of the medical literature at reasonable cost.

RANDOLPH LYONS, M. D.

Hemorrhoids: The Injection Treatment and Pruritus Ani: By Lawrence Goldbacher, M. D. Philadelphia, F. A. Davis Company. 1930. pp. 205.

The outstanding feature of the book is the advocacy of the injection of 5 per cent phenol in oil for the cure of hemorrhoids and certain types of prurius ani. Remarkably large doses are used at an injection—8 or 10 cc. at a single site. It is hard to realize the results could be as wonderful as reported. The author states that he has never seen any untoward results from these injections.

The book is neatly arranged and has many good illustrations, but the method of treatment recommended and the claim of such uniformly good results seem rather bold.

MAURICE LESCALE, M. D.

PUBLICATIONS RECEIVED

F. A. Davis Company, Philadelphia: Tonsil Surgery, by Robert H. Fowler, M. D. Practical Psychology and Psychiatry, by C. B. Burr, M. D.

The MacMillan Company, New York: Disease and the Man, by George Draper, M. D.

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Charles C. Thomas, Springfield, Illinois and Baltimore: Diseases Transmitted from Animals to Man, by Thomas G. Hull.

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E. B. Saunders Company, Philadelphia and London: A Text-book on Orthopedic Surgery, by Willis C. Campbell, M. D., F. A. C. S. Treatment in General Practice, by Harry Beekman, M. D.

C. V. Mosby Company, St. Louis: Getting Well and Staying Well, by John Potts, M. D. Symptoms of Visceral Disease, by Francis Marion Pottenger, A .M., M. D., LL.D., F. A. C. P.

D. Appleton and Company, New York and London: Psychology, by James Winfred Bridges, Ph. D.

G. P. Putnam's Son, New York: Gynecology for Nurses and Gynecological Nursing, by Comyns Berkeley, M. A., M. D. Lectures upon the Nursing of Infectious Diseases, by F. J. Woollacott, M. A., M. D., B. Ch. Oxon, D. P. H. A Textbook of Orthopedic Nursing, by Evelyn C. Pearce.

Lea & Febiger, Philadelphia: Roentgenographic Technique, by Darmon Artelle Rhinehart, A. M., M. D. The Essentials of Histology, by Sir Edward Sharpey Schafer, F. R. S. Hypertension and Nephritis, by Arthur M. Fishberg, M. D.